AN EVALUATION OF VARIOUS TRANSPORT CODES AND APPLICATIONS FOR THE SIMULATIONS OF PESTICIDE MOVEMENT TO WATER TABLE AQUIFERS

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PESTICIDE MOVEMENT TO WATER

TABLE AQUIFERS

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CHAPTER I

INTRODUCTION

Application of pesticides to agricultural lands may ultimately appear as potential wide-spread residues in groundwater. In a recent groundwater monitoring report [1], seventeen different pesticides have been found in the groundwater in twenty-three states. Aldicarb and its metabolites have been reported in 15 states [1]. In California, 54 pesticides have been detected in 2893 wells [2]. DBCP (1,2-dibromo-3-chloropropane) alone had been found in 2500 wells, which resulted in the closure of 1000 drinking water wells [2,3]. About 700,000 people in 32 towns were drinking DBCP-contaminated water or had to seek alternative drinking water supplies [3].

The presence of pesticide residues in groundwater reveals a potential threat to public health. Toxicological evidence from animal studies has shown that some of these chemicals are carcinogenic, while, some have other acute or chronic effects [2]. In an epidemiological study conducted by the California Department of Health Services in Fresno County, where drinking water wells were contaminated with DBCP, the results showed that an increase of stomach cancer deaths was related to the increased DBCP concentration in drinking water [2].

The appearance of pesticide residues in groundwater has received considerable attention in the last few years [4]. Numerous investigations have been devoted to studying pesticide transport and dissipation processes in the natural environment. To predict ground water contamination from pesticide applications, it is essential to understand how these chemicals are delivered to the groundwater system, and how they are affected by various environmental factors.

The natural environment interacting with pesticides can be divided into several zones (Fig 1), extending from the surface layer into the plant root zone, and through the vadose zone, to the saturated zone [5]. At the surface, pesticides can be removed by volatilization and decomposition, delivered with runoff and erosion, or carried with infiltration water into the plant root zone. In the surface zone, the important environmental and agronomic factors which affect surface conditions include climatic conditions, water management methods, crop type, and cropping practices [6].

Climatic conditions determine the quantity of water available for surface runoff, infiltration, and evaporation. The amount of water infiltrating at the soil surface and leaving the plant root zone may become ground-

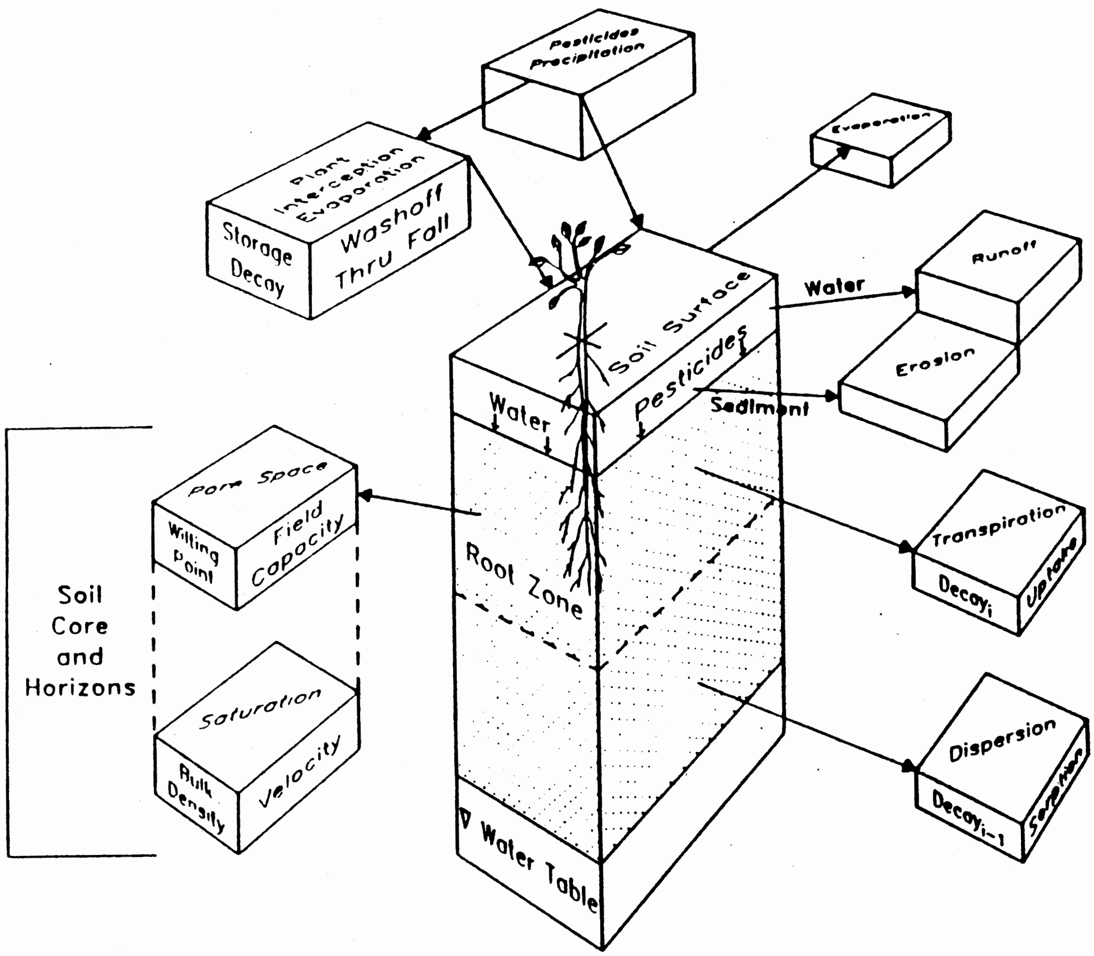

Figure (1). Pesticide Transport In The Natural Environmental. (Copy From PRZM User's Manual [12]) water recharge if it reaches the water table [7]. Soluble pesticides can be carried with percolating water and transported through the unsaturated zone to groundwater. To predict pesticide transport in environment, it is important to understand water movement, as it is the vector for pesticide movement [8].

Cropping practices and surface conditions dominate the water balance at the surface zone, and the magnitude of water partitioned into surface runoff and infiltration [6]. In a recent study [7], various tillage practices were simulated to evaluate their impact on pesticide concentrations in ground and surface water. Reduced tillage practices decreased surface runoff, erosion and pesticide concentration while groundwater loading and pesticide leaching were increased.

When pesticides are carried with infiltration water into the plant root zone, they may be transported further into the vadose zone, removed by plant uptake or dissipated in decay. Pesticide transport and transformation processes in the subsurface are complicated and related to many factors, including advection and dispersion in percolating water, adsorption and desorption in soil and solution, and chemical and biological degradation in adsorbed and dissolved phases [6]. Pesticide migration below the plant root zone has similar transport and transformation processes as occur in the root zone, with the exception of plant uptake. Pesticide leaching into the vadose zone may become a potential threat to the quality of the receiving groundwater systems.

According to the results of a groundwater monitoring report in 1986 [1], pesticide contamination was not found to be a potentially serious problem in Oklahoma. However, it is important to note that present or past findings of pesticides in groundwater do not reflect the potential magnitude of the groundwater contamination problem, as these chemicals may be continuously transported in the subsurface toward the groundwater [9]. For example, DBCP was banned in California in 1977, yet it was still detected in 2522 wells in 1984 [3]. When these contamination problems occur, the potentially wide-spread nature of these chemicals will make remedial actions difficult and expensive, because there is no single plume generated as in a point source which can be subsequently isolated or controlled [10].

Protecting groundwater from contamination has steadily grown as a concern in both urban and rural areas [5]. Investigations and studies have been devoted to seeking adequate management practices to minimize groundwater contamination from agricultural chemicals. To maintain groundwater quality will require practical approaches to understand the relationships between agricultural applications and pesticide fate in the surface and subsurface. Adequate agricultural management practices or regulatory policies require effective assessments of potential impact of pesticide applications on groundwater quality. However, in the interim before extensive groundwater monitoring programs are established, information concerning the current groundwater quality situation and its relation to the on-going agricultural practices is lacking.

The information gap between agricultural management practices and groundwater quality can be partially filled by computer modeling. Mathematical models have been increasingly used to simulate pesticide movements and interactions with the soil systems in the surface and subsurface [10]. Computer modeling provides a logical, meaningful mechanism to describe pesticide migration in soil-water-plant systems [6,10], and can be used to assess the potential for future groundwater pollution [9]. Models may be employed to indicate the relative efficiencies of available management practices to minimize groundwater contamination from agricultural chemicals. Especially, when limited field data are available, computer modeling can provide meaningful technical support and information for agricultural managers.

There are many computer models available for predicting pesticide leaching from agricultural applications. However, choosing an effective modeling approach is critical for agricultural management practices and regulatory policies, so that the opportunities of groundwater contamination in the future could be reduced. In this research, several modeling approaches were evaluated in terms of their abilities to predict pesticide leaching to groundwater under various climatic conditions and agricultural practices.

Three publicly available computer models were operated independently and sequentially to determine differences between the amounts of leaching predicted and the simulated depths of pesticide movement per year. These codes were the Environmental Protection Agency's Pesticide Root Zone Model (PRZM), the U.S. Department of Agriculture's Groundwater Loading Effects of Agricultural Management Systems (GLEAMS), and a finite element model (FEM) developed from a code called SUMATRA1, available from the International Ground Water Modeling Center (IGWMC) at Butler University [11,13,15].

PRZM was developed to simulate pesticide transport in the unsaturated soil systems within and below the plant root zone [12]. PRZM considered precipitation, evaporation, runoff and infiltration for water balance in the surface zone. A modification of the Soil Conservation Service (SCS) Curve Number approach [11] was applied to calculate amount of rainfall which are partitioned into runoff and infiltration from daily rainfall. Snowmelt was incorporated into the calculation of surface runoff by applying a snowmelt factor and daily temperatures.

Within the root zone, PRZM estimated water movement associated with plant transpiration, soil evaporation, and percolation with a compartmental mass balance equation of water. PRZM employed pan factor and pan evaporation to predict potential evapotranspiration demand. If pan evaporation data was not available, average hours of day-light and saturated vapor density at the mean air temperature were used to estimate potential evapotrans-piration. PRZM predicted plant transpiration with a root zone growing function. Dates of crop emergence, maturation and harvest were used to represent different periods of crop growing and related to the active rooting depth. A depth factor was internally set in PRZM code to linearly weight the extraction of evapotranspiraton from the root zone [12]. Below the root zone, upward move-ment of water was ignored, and the water balance was based on two reference states of soil moisture contents, field capacity and wilting point [6,12].

In the surface zone, PRZM considered pesticide delivered in the runoff, by erosion, carried with infil-tration water, and lost in decay. A Modified Universal Soil Loss Equation (MUSLE) was employed to estimate soil loss in erosion, and with an enrichment ratio of organic matter to calculate pesticide attachment to the sediments

[12]. PRZM used a daily time step for water balance computations, however, an averaged storm duration interval was applied to mimic the storm events for estimating the peak runoff rates.

In the subsurface, a partial differential equation was employed to describe pesticide transport in advection, dispersion, and lost in decay. A backward-differential, implicit numerical scheme was applied to solve the solute transport equation on the basis of daily time step and an user-specified spatial increment [6,11,12]. However, the pore water velocity which contributed to solute advection was not calculated according to the Darcy's equation. PRZM estimated the pore water velocity and soil moisture separately with a user-specified drainage condition and two soil moisture states, field capacity and wilting point [12]. These resulting values were treated as constants in the solute transport equation for each daily time step [11,12].

PRZM was designed to allow simulations of pesticide leaching with a minimum amount of specialized field data [6]. The required input data were generally available from existing sources, either summarized in the PRZM User's Manual or in readily available references. This research effort with PRZM was focused upon an evaluation of its ability to simulate pesticide leaching from the surface zone to the base of the root zone as well as to deeper depths approximating the top of aquifers.

GLEAMS was modified by the USDA as an extension of the CREAMS for field size areas to evaluate the movement of agricultural chemicals within and through the plant root zone [13]. CREAMS was developed as a management-oriented model to simulate agricultural chemicals delivered in runoff, by erosion and sediments under various agricultural management practices [13]. In order to consider the groundwater contamination impact from agricultural management system, GLEAMS then included the vertical flux of pesticide within and through the plant root zone.

In the surface zone, GLEAMS used the SCS curve number method to partition water in runoff and infiltration from daily rainfall, which was similar to PRZM. However, a soil depth-weighted retention factor was incorporated in GLEAMS to consider soil saturation and water retention in the surface [14]. Snowmelt was considered for water balacne in the surface. Within the root zone, GLEAMS calculated plant transpiration, soil evaporation, soil storage, and infiltration with a compartmental water balance equation on a daily time interval. GLEAMS calculated soil evaporation and plant transpiration separately [17]. GLEAMS used mean monthly maximum and minimum temperatures, and mean monthly solar radiation to estimate potential evaporation. Leaf area index (LAI) was used to represent different stages of crop growing and to estimate plant transpiration. Field capacity was applied as a reference state of soil moisture in predicting percolation water. This drainage mechanism was similar to that in PRZM.

The simulation processes employed in GLEAMS to predict chemical movement in the surface were relatively sophisticated when compared to PRZM. Some of the required input data concerning watershed conditions and soil particle characteristics were not generally available from existing data sources. GLEAMS retained the capability from CREAMS in simulating solute transport in surface run-off and erosion for field size areas. Channel flow and impoundments can be considered to calculate water movement and sediment yield for a watershed. GLEAMS estimated pesticide extracted into runoff, attached onto eroded particles, and carried with infiltration water into the root zone. Detailed soil particle characteristics were required to calculate the enrichment ratio for estimating pesticide losses in the soil erosion. The Universal Soil Loss Equation (USLE) was modified to calculate soil detachment and sediment transport separately on an individual storm basis. Storm events were calculated with the daily time interval by means of a rating equation developed by the USDA.

Within the root zone, a compartmental mass balance equation was employed to estimate pesticide delivered with the infiltration water. Solute transport phenomena such as advection and dispersion were not considered in GLEAMS. Therefore, no partial differential equation was involved in GLEAMS to simulate solute transport in the unsaturated soil systems. The movement of water and chemicals below the root zone were not considered in GLEAMS.

PRZM adopted a lumped first-order rate constant (Ks) to account for pesticide decomposition in the natural environment [12]. The rate constant Ks for the sorbed and dissolved phases are assumed to be identical. In GLEAMS, a pesticide half-life constant ($S\frac{1}{2}$) in a first-order rate equation was used to predict pesticide degradation in soil and water. Pesticide degradability and the effects of natural environment such as soil moisture, temperature, pH and soil type can be employed to estimate $S\frac{1}{2}$ (days) according to the special guidelines listed in CREAMS Manual [17]. However these specific approaches have not proven to be consistently reliable [17]. A lumped first-order rate constant Ks could also be used to estimate the pesticide half-life with the equation: ($S\frac{1}{2}$ = 0.693/ Ks) supplied in GLEAMS User's Manual. GLEAMS and PRZM should predict pesticide degradation in soil and water in a similar manner if a Ks constant was applied in both models.

In this research, GLEAMS was evaluated as an alternative to PRZM in simulating pesticide transport in the surface zone. The first effort of this research was to evaluate the performance of PRZM and GLEAMS in predicting pesticide transport from the surface to the base of the root zone under various climatic and agronomic conditions.

SUMATRA1 was developed as a mathematical model to simulate the simultaneous movement of water and solute in a one-dimensional saturated-unsaturated soil profile [15]. A Hermitian finite element solution was applied to solve the partial differential equations for water and solute transport in the unsaturated soil systems. The model considered advection, dispersion, adsorption, first and zero order decay for solute transport and transformation in the soil profile. These factors are equivalent to those in PRZM for pesticide transport below the root zone. However, pesticide movement in the surface zone such as runoff and erosion, and plant uptake within the root zone were not considered in SUMATRA1. Only the positive and negative flux rates were used as boundary conditions to mimic the infiltration and evaporation for water movement in the surface. Therefore, SUMATRA1 was not applicable for simulating pesticide transport in the surface zone. However, it can be applied as a mathematical model to simulate water movement and chemical transport in the unsaturated soil systems.

The FEM was modified from SUMATRA1 to accommodate impulsive water and solute boundary conditions. In a second effort of this research, PRZM and GLEAMS were linked with the one dimensional finite element model (FEM). As previously mentioned, PRZM applied a simplified method to estimate pesticide transport in the subsurface and GLEAMS did not consider pesticide transport below the root zone. Therefore, a true unsaturated zone transport model was applied to link these respective root zone models as an alternative to the user-specified drainage rate approach found in PRZM to estimate pesticide transport through the unsaturated zone to depths approximating shallow water tables ($\leq$ 30 feet).

In this manner, a pesticide root zone model (PRZM) was linked with a one dimensional finite element model (PRZM+FEM) to simulate pesticide transport in the subsurface. That is, the pesticide movements in the surface zone and within the root zone were simulated by PRZM, and FEM was responsible for the pesticide transport below the root zone. Similarly, an agricultural management model (GLEAMS) was linked with a one dimensional finite element model (GLEAMS+FEM). GLEAMS estimated the water loading and pesticide movement at the base of the root zone, and the output was transferred to FEM for predicting pesticide transport below root zone. The structure of this research effort is shown in Table I.

Three different pesticides, rainfall years, and cropping practices were used as independent variables for simulation by the three models to evaluate pesticide leaching. Statistical methods were applied to compare the simulation results. The effects of model selection, the input data chosen and the environmental factors simulated were identified. Pesticide peak concentration, depth of peak concentration and the soluble mass in core were statistically compared to evaluate the differences between the various codes. A primary structure of modeling applications for this research is shown in Figure (2).

TABLE I

RESEARCH STRUCTURE UTILIZED TO COMPARE TRANSPORT APPROACHES FOR PESTICIDE LEACHING TO GROUNDWATER

Model	Simulation Status
PRZM	Plant Root Zone
GLEAMS	Plant Root Zone
PRZM	Plant Root Zone + Vadose Zone
PRZM+FEM	Plant Root Zone + Vadose Zone
GLEAMS+FEM	Plant Root Zone + Vadose Zone

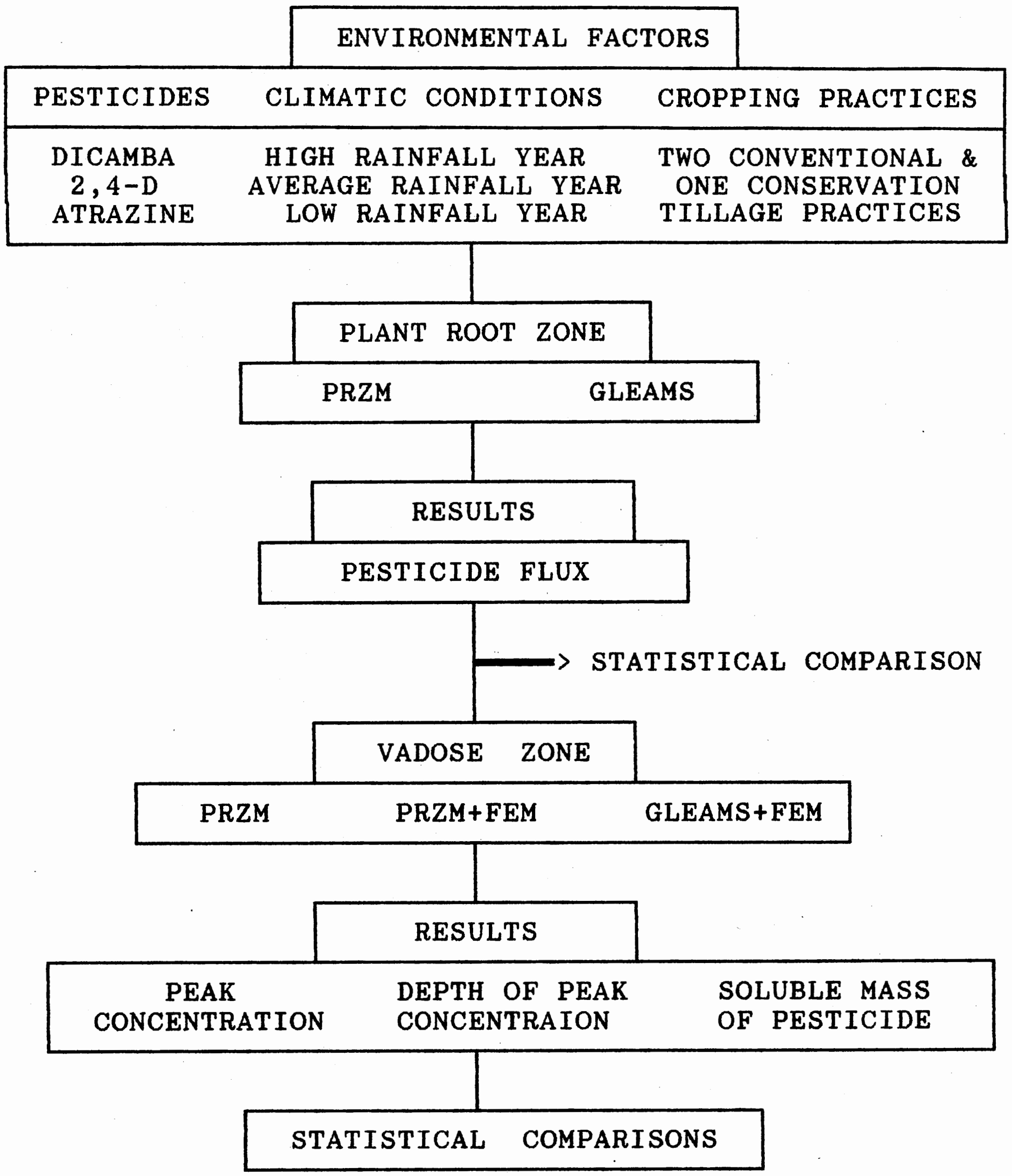

Figure (2). Primary Research Structure

CHAPTER II

ABSTRACT

Several publicly available computer models were evaluated independently and sequentially in terms of their abilities to simulate pesticide transport from the surface to the top of the water tables. PRZM and GLEAMS were evaluated in terms of their abilities to simulate pesticide transport from the land surface to the base of the root zone under various climatic and agronomic conditions. PRZM and GLEAMS were linked with a finite element model (PRZM+FEM, GLEAMS+FEM) as alternatives to PRZM in simulating pesticide transport to deeper locations in the unsaturated zone.

Three different pesticides, rainfall years and curve numbers were employed as independent variables for simulation. Pesticide flux at the base of the root zone, peak concentration, penetrated depth of peak concentration and soluble mass in core were statistically compared to determine the differences between the relative modeling approaches.

Statistical comparisons showed that PRZM was significantly different from GLEAMS in predicting pesticide flux at the base of the root zone. PRZM, PRZM+FEM and GLEAMS+FEM were statistically different from each other when

pesticide were evaluated separately. However, the three models were not significantly different in each individual rainfall year. The comparisons also indicated that pesticide and rainfall year selections were important factors for simulations, while curve number did not reveal significant influence on the simulation results.

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INTRODUCTION

Pesticides applied to agricultural lands may ultimately appear as potential wide-spread residues in groundwater. In a recent groundwater monitoring report [1], seventeen different pesticides have been found in the groundwater in twenty-three states. In California, 54 pesticides have been detected in 2893 wells [2]. DBCP (1,2-dibromo-3-chloropropane) alone had been found in 2500 wells, and resulted in the closure of 1000 drinking water wells [2,3]. The presence of pesticide residues in groundwater reveals a potential threat to public health. Toxicological evidence from animal studies has shown that some of these chemicals are carcinogenic, while, some have acute or chronic effects [2].

The appearance of pesticide residues in groundwater has received considerable attention in the last few years [4]. Protecting groundwater from contamination has steadily grown as a concern in both urban and rural areas [5]. Investigations and studies have been devoted to seeking adequate management practices to minimize groundwater contamination from agricultural chemicals. Obtaining a "best" agricultural management practice requires effective assessments of the potential impact of pesticide application on groundwater quality. However, in the interim before extensive groundwater monitoring programs are established, information concerning the current groundwater quality situation and it's relation to the on-going agricultural practices is lacking.

This information gap between agricultural practices and groundwater quality can be partially filled by computer modeling. Mathematical models have been increasingly used to simulate pesticide movements and interactions with the soil systems in the surface and subsurface [10]. Computer modeling can be used to assess the potential for future groundwater pollution [9], and indicate the relative efficiencies of available management practices to minimize groundwater contamination from agricultural chemicals. Especially, when limited field data are available, computer modeling could provide meaningful technical support and information for agricultural managers.

There are many computer models available for predicting pesticide leaching from agricultural applications. However, choosing an effective modeling approach is critical for identifying agricultural management practices and regulatory policies, so that the opportunities of groundwater contamination in the future could be reduced. In this research, several modeling approaches were evaluated in terms of their abilities to predict pesticide leaching to groundwater under various climatic conditions and agricultural practices. Three publicly available computer models were operated independently and sequentially to determine differences between the amounts of leaching predicted as well as the simulated depths of pesticide movement per year. These codes were the Environmental Protection Agency's Pesticide Root Zone Model (PRZM), the U.S. Department of Agriculture's Ground-water Loading Effects of Agricultural Management Systems (GLEAMS), and a finite element model (FEM) developed from a code called SUMATRA1, available from the International Ground Water Modeling Center at Butler University [12,13,15].

PRZM was developed to simulate pesticide transport in the unsaturated soil systems under various climatic conditions, cropping practices and soil characteristics [12]. PRZM considered precipitation, evapotranspiration, runoff, and infiltration for water balance in the surface zone. A modification of the Soil Conservation Service (SCS) Curve Number approach [11] was applied to calculate water partitioned into runoff and infiltration from daily rainfall. Snowmelt was incorporated into the calculation of surface runoff by applying a snowmelt factor and daily temperatures.

Within the root zone, PRZM employed pan factor and pan evaporation to estimate potential evapotranspiration demand. If pan evaporation data was not available, average hours of daylight and saturated vapor density at the mean air temperature were used to estimate potential evapotranspiration. PRZM predicted plant transpiration with a root zone growing function. A depth factor was internally set in PRZM code to linearly weight the extraction of evapotranspiration from the root zone [12]. Dates of crop emergence, maturation and harvest are used to represent different periods of crop growing and related to the active rooting depth. Below the root zone, upward movement of water was ignored, and water balance was based on two reference states of soil moisture contents, field capacity and wilting point [6, 12].

PRZM considered pesticide delivered by runoff and erosion in the surface zone. A Modified Universal Soil Loss Equation (MUSLE) was employed to estimate soil loss in erosion, and with an enrichment ratio of organic matter to calculate pesticide attachment to the sediments [12]. PRZM used a daily time step for water balance computation, however an averaged storm duration interval was applied to mimic the storm events for estimating the peak runoff rates.

In the subsurface, a partial differential equation was employed to describe pesticide transport in advection, dispersion, and lost in decay. A backward-differential, implicit numerical scheme was applied to solve the partial differential equation on the basis of daily time step and an user-specified spatial increment [6,11,12]. However, the pore water velocity which contributed to solute advection was not calculated according to the Darcy's equation. PRZM estimated the pore water velocity and soil moisture content separately with a user-specified drainage condition and two soil moisture states, field capacity and wilting point [12]. These resulting values were treated as constants in the solute transport equation for each daily time step [11,12].

A lumped first-order rate constant (Ks) was adopted in PRZM to account for pesticide decomposition in the natural environment. PRZM assumed the rate constants Ks for the sorbed and dissolved phases to be identical. PRZM was designed to allow realistic simulations of pesticide leaching with a minimum amount of specialized field data [6]. The required input data were generally available from existing sources, either summarized in the PRZM User's Manual or in readily available references. This research effort with PRZM was focused upon an evaluation of its ability to simulate pesticide leaching from the surface to the base of the root zone as well as to deeper depths approximating the top of water table.

GLEAMS was developed from CREAMS by the USDA to evaluate the movement of agricultural chemicals within and through the plant root zone [13]. CREAMS was developed as a management-oriented model to simulate the agricultural chemicals delivered in runoff, by erosion and sediments under various agricultural management practices [13]. In order to consider the impact of groundwater contamination from agricultural management systems, GLEAMS was then modified to include the vertical flux of chemical transport within and through the plant root zone. However, the movement of water and chemicals below the root zone were not considered in GLEAMS.

For water balance in the surface zone, GLEAMS used the SCS curve number method to partition water in runoff and infiltration from daily rainfall, which was similar to PRZM. However, a soil depth-weighted retention factor was incorporated in GLEAMS to consider soil saturation and water retention in the surface [14]. Within the root zone, GLEAMS calculated plant transpiration, soil evaporation, soil storage, and infiltration with a compartmental water balance equation on a daily time interval. GLEAMS calculated soil evaporation and plant transpiration separately. GLEAMS used mean monthly maximum and minimum temperatures, and mean monthly solar radiation to estimate potential evaporation. Leaf area index (LAI) was used to represent different stages of crop growing and to estimate plant transpiration. Field capacity was applied as a reference state of soil moisture in predicting percolation water. This drainage mechanism was similar to that in PRZM.

The simulation processes employed in GLEAMS to predict chemical movement in the surface zone were relatively sophisticated when compared to PRZM. Some of the required input data concerning watershed conditions and soil particle characteristics were not generally available from the existing data sources. GLEAMS retained the capability from CREAMS in simulating solute transport in surface runoff and erosion for field size areas. Channel flow and impoundments can be employed to calculate water movement and sediment yield for a watershed. GLEAMS considered pesticide extracted into runoff, attached onto eroded particles, and carried with infiltration water into the root zone. Detailed soil particle characteristics were required to calculate the enrichment ratio for estimating pesticide losses in the soil erosion. The Universal Soil Loss Equation (USLE) was modified to calculate soil detachment and sediment transport separately on the basis of an individual storm event. Storm events were estimated with the daily time interval by means of a rating equation developed by the USDA.

GLEAMS used a pesticide half-life constant ($S\frac{1}{2}$) in a first-order rate equation to predict pesticide degradation in soil and water. Pesticide degradability and the effects of natural environment such as soil moisture, temperature, pH and soil type can be employed to estimate $S\frac{1}{2}$ (days) according to the special guidelines listed in CREAMS Manual. However these specific approaches have not proven to be consistently reliable [17]. The pesticide half-life constant $S_{\frac{1}{2}}$ can be estimated from a lumped first-order rate constant Ks with the equation supplied in GLEAMS User's Manual ($S_{\frac{1}{2}} = 0.693/Ks$). GLEAMS and PRZM should predict pesticide degradation in a similar manner if a Ks constant was applied in both models.

Within the root zone, a compartmental mass balance equation was employed to estimate pesticide delivered with the infiltration water. Solute transport phenomena such as advection and dispersion were not considered in GLEAMS. Therefore, no partial differential equation was involved in GLEAMS to simulate solute transport in the unsaturated soil systems. In this research, GLEAMS was evaluated as an alternative to PRZM in simulating pesticide transport in the surface zone. The first effort of this research was to evaluate the performance of PRZM and GLEAMS in predicting pesticide transport from the surface to the base of the root zone under various climatic and agronomic conditions.

SUMATRA1 was developed as a mathematical model to simulate the simultaneous movement of water and solute in a one-dimensional saturated-unsaturated soil profile [15]. A Hermitian finite element solution was applied to solve the partial differential equations for water and solute transport in the unsaturated soil systems. The model considered advection, dispersion, adsorption, first and zero order decay for solute transport and transformation in the soil profile. These factors are equivalent to those in PRZM for pesticide transport below the root zone. However, pesticide movement in the surface zone such as runoff and erosion, and plant uptake within the root zone were not considered in SUMATRA1. Only the positive and negative flux rates were used as boundary conditions to mimic the infiltration and evaporation for water movement in the surface. Therefore, SUMATRA1 was not applicable for simulating pesticide transport in the surface zone under various agronomic and climatic conditions. However, it can be applied as a mathematical model to simulate water movement and chemical transport in the unsaturated soil systems.

The FEM was modified from SUMATRA1 to accommodate impulsive water and solute boundary conditions. In a second effort of this research, PRZM and GLEAMS were linked with the one dimensional finite element model (FEM). As previously mentioned, PRZM applied a simplified method to estimate pesticide transport in the subsurface, and GLEAMS did not consider pesticide transport below the root zone. Therefore, a true unsaturated zone transport model was applied to link with these respective root zone models as an alternative to the user-specified drainage rate approach found in PRZM to estimate pesticide transport through the unsaturated zone to depths approximating shallow water tables ($\leq$ 30 feet).

In this manner, a pesticide root zone model (PRZM) was linked with a one dimensional finite element model (PRZM+FEM) to simulate pesticide transport in the subsurface. That is, the pesticide movements in the surface zone and within the root zone were simulated by PRZM, and FEM was responsible for the pesticide transport below the root zone. Similarly, an agricultural management model (GLEAMS) was linked with a one dimensional finite element model (GLEAMS+FEM). GLEAMS estimated the water loading and pesticide movement at the base of the root zone, and the output was transferred to FEM for predicting pesticide transport below the root zone. The structure of this research effort is shown in Table II.

Three different pesticides, rainfall years, and cropping practices were used as independent variables for simulation by the three models to evaluate the influence of these environmental factors on pesticide leaching. Statistical methods were applied to compare the results from each model. The effects of model selection, the input data chosen and the environmental factors simulated were identified. Pesticide peak concentration, depth of peak concentration, and the soluble mass in core were statistically compared to evaluate the differences between the various codes.

TABLE II

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Model	Simulation Status
PRZM	Plant Root Zone
GLEAMS	Plant Root Zone
PRZM	Plant Root Zone + Vadose Zone
PRZM+FEM	Plant Root Zone + Vadose Zone
GLEAMS+FEM	Plant Root Zone + Vadose Zone

MATERIALS AND METHODS

Model Modifications

GLEAMS predicts pesticide delivered in the surface runoff and erosion, and transported with infiltration water to the root zone. However pesticide partitioned in decay and plant uptake, or stored in the core was not available in the output. In order to define these individual components of partitioned pesticides, GLEAMS was modified to print out the mass in plant uptake, decay and storage in the core. This effort was accomplished by modifying the GLEAMS source program to calculate pesticide partitions in the daily loop and output the results in the annual loop.

FEM was modified from SUMATRA-1 to accommodate water impulse and varying solute boundary conditions as the intent of this effort was to prepare FEM for model linkage PRZM + FEM and GLEAMS + FEM. Fixed water and solute boundary conditions in FEM code were replaced by batch input-files of water and solute fluxes according to daily time sequences. Soil and solute data in the source code was substituted with input files to allow various soil conditions and pesticide properties to be used.

Model Linkage

The linkage of FEM with PRZM and GLEAMS involves the transformation of water loading and pesticide leaching flux out of the root zone to become boundary conditions for the FEM. PRZM provides a daily series of water loadings and solute fluxes through the root zone. These series of water loading rates are collected and transferred to a batch input file for the boundary conditions of water fluxes in the FEM. Similarly, the daily series of pesticide fluxes through the root zone are collected for the boundary conditions of solute flux in the FEM.

For example, in a one-year simulation period, PRZM generates 365 water fluxes and 365 solute fluxes on a daily time step. These series of water fluxes and solute fluxes were used as impulsive boundary conditions for FEM. The GLEAMS model also generates daily time series of water recharge and pesticide flux through the root zone. Output data from GLEAMS were linked to the FEM in similar fashion as previously described for PRZM.

Input Data

PRZM and GLEAMS employed climatic conditions, soil properties and pesticide characteristics to simulate pesticide transport in the surface and into the root zone, while FEM required soil properties and solute characteristics. The intent of this effort was to make all input data used in these codes equivalent. In this manner, any differences which resulted could be attributed to fundamental internal differences between the various codes. The approach taken was to identify all of the input requirements for each model. These data were then normalized to each other where possible to insure that they were equivalent. Where this wasn't possible, an alternative approach was implemented; a local site was selected for simulation. All remaining input data for each code were generated from local features. In this way a measure of uniformity between the input data sets used by the respective codes was achieved.

Grant County in the northern Oklahoma was selected as the local site for this data collection effort. The soil properties, climatic conditions and agricultural practices employed in this county were used in all subsequent simulations. Pesticide characteristics were collected or estimated according to the guidance in the PRZM User's Manual and the CREAMS supporting documentations [12,17]. Detailed descriptions of input data for PRZM, GLEAMS and FEM are listed in Appendix A.

The input data sets including soil properties, precipitation, pesticide characteristics and cropping practices are described below.

Soil. Pesticide leaching problems could prove more serious in sandy, loose soils. Aline fine sand in Grant County was employed as the simulation medium in this research for a worst case consideration. This soil type is classified as hydrologic group A. The required soil properties were collected from the SCS soil survey of Grant County, Oklahoma [16].

Pesticide Characteristics. The response of three pesticides was simulated in this study (Dicamba, 2,4-D and Atrazine). These pesticides are commonly applied as herbicides in Oklahoma. Pesticide characteristics employed in the simulations are listed in Table III.

A pesticide degradation rate constant Ks was selected from the PRZM or CREAM User's Manual [12, 17]. Soil half-life constant $S\frac{1}{2}$ for GLEAMS was estimated from Ks with the equation furnished in GLEAMS Manual, ($S\frac{1}{2} = 0.693/Ks$), and the resulting values are listed in Table III. The sorption partition coefficients (Kd) for the surface and the root zone were calculated according to the guidance given in the PRZM manual [12]. Calculated values, when extended below the root zone for deeper simulations, were adjusted according to the organic content in each soil stratum, Kd = (Koc) * (percent of organic carbon/ 100). These estimated Kd values are shown in Table IV.

Pesticides can be applied directly to the soil

TABLE III

PESTICIDE CHARACTERISTICS

Kow = OCTANOL WATER DISTRIBUTION COEFFICIENT
Ks = PESTICIDE DECAY RATE
Koc = ORGANIC CARBON DISTRIBUTION COEFFICIENT

	Pesticide			
Properties	Dicamba	2,4-D	Atrazine	Ref.
Solubility (ppm)	4500.0	900.0	33.0	[17]
Molecular weight	221.04	221.04	216.06	[18]
Log Kow (cm^3/g)	0.48	2.81	2.45	[12]
Ks (1/day)	0.0197	0.1036	0.0131	[12,17]
Koc (cm^3/g)	1.862	398.1	173.8	[12]
$S_{\frac{1}{2}}$ Soil half-life (day)	35.2	6.69	52.9	[17]
Plant uptake coefficient	0.392	0.507	0.652	[12]

surface, the plant canopy, or to both [12]. In this study, pesticide was incorporated 10 cm below the surface, with a 1 Kg per hectare application rate. Pesticides were assumed to be applied in soil only, foliar extraction and foliar decay were not considered in the simulations.

TABLE IV

CALCULATED Kd (CM^3/G) FOR SOIL STRATA

	Soil Strata (cm)			
Pesticides	0-22.9	22.9-81.3	81.3-183	Below 183
Dicamba	0.017	0.00316	0.00223	0.0037
2,4-D	3.66	0.677	0.478	0.796
Atrazine	1.60	0.29	0.21	0.348

Climatic Conditions. Three rainfall years were used for simulation to evaluate the effects of precipitation on pesticide transport to the subsurface. The yearly precipitation data employed in the simulation included a high rainfall year, a low rainfall year, and an average rainfall year from the 1954 - 1978 records collected at the nearest class 1 meterological station in the northern Oklahoma (Great Salt Plains Lake). Summaries of these precipitation data for the three selected years are listed in Table V.

TABLE V

PRECIPITATION RECORDS FOR THREE RAINFALL YEARS FROM THE CLASS 1 METEROLOGICAL STATION AT GREAT SALT PLAIN LAKE, OKLAHOMA

Month	Precipitation Records (cm)		
	Low (1954)	Average (1969)	High (1957)
January	0.18	0.16	2.18
February	0.15	3.31	3.27
March	0.59	6.36	10.62
April	8.05	6.55	16.32
May	8.10	11.66	17.85
June	5.61	12.75	23.68
July	0.66	2.33	6.12
August	2.55	8.82	4.77
September	1.27	11.53	17.32
October	2.75	2.01	6.38
November	0.0	0.06	4.10
December	0.31	2.24	0.86
Annual	30.22	67.78	113.46

Runoff Curve Number. In PRZM and GLEAMS, the interactions of hydrologic soil group, and land treatment were accounted by assigning a runoff curve number (CN) to the soil cover complexes to assess the average soil moisture condition [12]. The soil cover complexes include fallow, cropping, and residue for a crop growing season. Two conventional tillage and one conservation tillage practices in the soil type of hydrologic group A were considered in this study to evaluate the impact of agricultural cropping practices on pesticide leaching. The curve numbers used in this research are listed in Table VI.

TABLE VI

CURVE NUMBER FOR SURFACE CONDITIONS

Land Treatment or Practices	Surface Conditions		
	Fallow	Cropping	Residue
Straight Row	77	63	70
Contoured And Terraced	77	59	68
Straight Row With Conser. Tillage	71	57	64

Statistical Analysis

The General Linear Model (GLM) procedure found in the Statistical Analysis System (SAS) program [19] was applied to statistically analyze the simulation results. This procedure established a linear model between the independent variables (models, pesticides, rainfall years and curve numbers) and the simulation results (pesticide flux, peak concentration, the penetrated depth of peak concentration and soluble pesticide mass). The purpose of this approach was to evaluate the influence of the independent variables on the simulation results and to distinguish the difference between the models. PRZM was compared with GLEAMS on the basis of pesticide leaching flux at the base of the root zone, while PRZM, PRZM+FEM and GLEAMS+FEM were compared with each other for peak concentration, leached depth of peak concentration and the soluble mass in core.

The outputs included analysis of variance (ANOVA) comparisons for PRZM and GLEAMS based on the pesticide leaching flux, and for PRZM, PRZM+FEM and GLEAMS+FEM on the basis of peak concentration, leaching depth and the soluble mass. The outputs addressed the significance of the independent variables: models, pesticides, rainfall years and curve numbers in each of the simulation results. If the ANOVA results indicated the relative models were statistically different, further statistical comparisons were used to distinguish the difference between models in each specific condition.

Additional statistical evaluations employed in this research included the Duncan's Multiple-Range Test which utilized a multiple comparison procedure to obtain all pairwise comparisons among the sample means [20]. Instead of making all comparisons with a single criterion, the range of the critical difference was adjusted depending upon the rank of the two population means. This approach was used to distinguish the difference between PRZM, PRZM+FEM and GLEAMS+FEM on the basis of peak concentration, depth of peak concentration and the soluble mass in core.

RESULTS

Pesticide Leaching Flux Below The Root Zone

Table VII lists the pesticide leaching fluxes below the plant root zone, simulated by PRZM and GLEAMS under various climatic conditions and cropping practices. They are the accumulated daily pesticide flux through the plant root zone at the end of one year simulation period. These results show the magnitude of pesticide transported below the root zone which is available for groundwater loading. PRZM tended to simulate higher pesticide leaching flux than did GLEAMS.

Rainfall year revealed apparent influences on PRZM and GLEAMS in simulating pesticide flux. PRZM predicted higher pesticide flux of Dicamba and 2,4-D in the average rainfall year while GLEAMS simulated higher leaching flux in the high rainfall year.

Curve numbers did not appear to exert a significant effect on the pesticide fluxes predicted by PRZM and GLEAMS. PRZM exhibited a slight response to the curve numbers used, while GLEAMS did not have any response to the change of curve numbers in the average and low rainfall years.

TABLE VII

ACCUMULATED PESTICIDE LEACHING FLUX (G/HA/YEAR) BELOW ROOT ZONE UNDER VARIOUS CLIMATIC CONDITIONS AND CURVE NUMBERS

HI = High Rainfall Year
AV = Average Rainfall Year
LO = Low Rainfall Year
CN:A = SCS Curve Number of 77, 63, 70
CN:B = SCS Curve Number of 77, 59, 68
CN:C = SCS Curve Number of 71, 57, 64

		Leaching Flux (g/Ha/Year)	
Pesticide	Conditions	PRZM	GLEAMS
Dicamba	HI - CN:A	612.3	352.7
	HI - CN:B	612.3	352.7
	HI - CN:C	612.3	352.7
	AV - CN:A	613.8	350.2
	AV - CN:B	613.9	350.2
	AV - CN:C	613.9	350.2
	LO - CN:A	221.3	124.9
	LO - CN:B	222.1	124.9
	LO - CN:C	222.4	124.9
2,4-D	HI - CN:A	6.625	0.0601
	HI - CN:B	6.626	0.0601
	HI - CN:C	6.626	0.0601
	AV - CN:A	7.268	0.0199
	AV - CN:B	7.268	0.0199
	AV - CN:C	7.268	0.0199
	LO - CN:A	0.04541	0.0002
	LO - CN:B	0.04557	0.0002
	LO - CN:C	0.04563	0.0002
Atrazine	HI - CN:A	348.3	266.92
	HI - CN:B	350.4	266.99
	HI - CN:C	351.8	267.02
	AV - CN:A	251.3	139.7
	AV - CN:B	254.8	139.7
	AV - CN:C	255.5	139.7
	LO - CN:A	115.0	43.41
	LO - CN:B	115.0	43.41
	LO - CN:C	115.0	43.41

Peak Concentration

The peak concentration of Dicamba, 2,4-D, and Atrazine simulated by PRZM, PRZM+FEM, and GLEAMS+FEM are shown in Table VIII. This table presents the predicted peak concentration of pesticides below the root zone at the end of one year of simulation time. These values are the peaks of the concentration profiles observed throughout the soil column simulated.

Figures (3-5) present the concentration profiles simulated by PRZM, PRZM+FEM and GLEAMS+FEM. It was observed that GLEAMS+FEM tended to simulate higher peak concentration than did PRZM and PRZM+FEM while, PRZM+FEM tended to predict higher peak concentration than did PRZM.

Rainfall year revealed different influences on the three models. It was observed that PRZM and PRZM+FEM simulated higher peak concentration for Dicamba and Atrazine in the low rainfall year. GLEAMS+FEM predicted higher peak concentration for 2,4-D and Atrazine in the high rainfall year.

Curve number did not exert significant effects on the three models. PRZM and PRZM+FEM had only slight responses to the curve numbers used, while GLEAMS+FEM did not respond to the change of curve numbers in the average and low rainfall years.

TABLE VIII

PEAK OF CONCENTRATION PROFILE BELOW THE ROOT ZONE SIMULATED BY PRZM, PRZM+FEM AND GLEAMS+FEM

		Peak Concentration (mg/L)		
Pesticide	Conditions	PRZM	PRZM+FEM	GLEAMS+FEM
Dicamba	HI - CN:A	.3236E-3	.8435E-3	.1094E-2
	HI - CN:B	.3182E-3	.8323E-3	.1091E-2
	HI - CN:C	.3113E-3	.9055E-3	.1090E-2
	AV - CN:A	.4555E-3	.9294E-3	.1437E-2
	AV - CN:B	.4509E-3	.9271E-3	.1437E-2
	AV - CN:C	.4448E-3	.9236E-3	.1437E-2
	LO - CN:A	.7908E-3	.2440E-2	.1950E-2
	LO - CN:B	.7844E-3	.2447E-2	.1950E-2
	LO - CN:C	.7793E-3	.2451E-2	.1950E-2
2,4-D	HI - CN:A	.2899E-15	.4851E-15	.1513E-16
	HI - CN:B	.2908E-15	.4755E-15	.1513E-16
	HI - CN:C	.2915E-15	.5418E-15	.1513E-16
	AV - CN:A	.4036E-15	.7132E-12	.1493E-17
	AV - CN:B	.4037E-15	.7323E-12	.1493E-17
	AV - CN:C	.4037E-15	.8251E-12	.1493E-17
	LO - CN:A	.6218E-15	.3465E-15	.1353E-18
	LO - CN:B	.6218E-15	.3762E-15	.1353E-18
	LO - CN:C	.6219E-15	.3833E-15	.1353E-18
Atrazine	HI - CN:A	.1260E-2	.3964E-2	.8873E-2
	HI - CN:B	.1258E-2	.4044E-2	.9032E-2
	HI - CN:C	.1248E-2	.4078E-2	.9104E-2
	AV - CN:A	.1450E-2	.4664E-2	.7831E-2
	AV - CN:B	.1453E-2	.4978E-2	.7831E-2
	AV - CN:C	.1452E-2	.4914E-2	.7831E-2
	LO - CN:A	.2331E-2	.5873E-2	.2944E-2
	LO - CN:B	.2331E-2	.6400E-2	.2944E-2
	LO - CN:C	.2331E-2	.6516E-2	.2944E-2

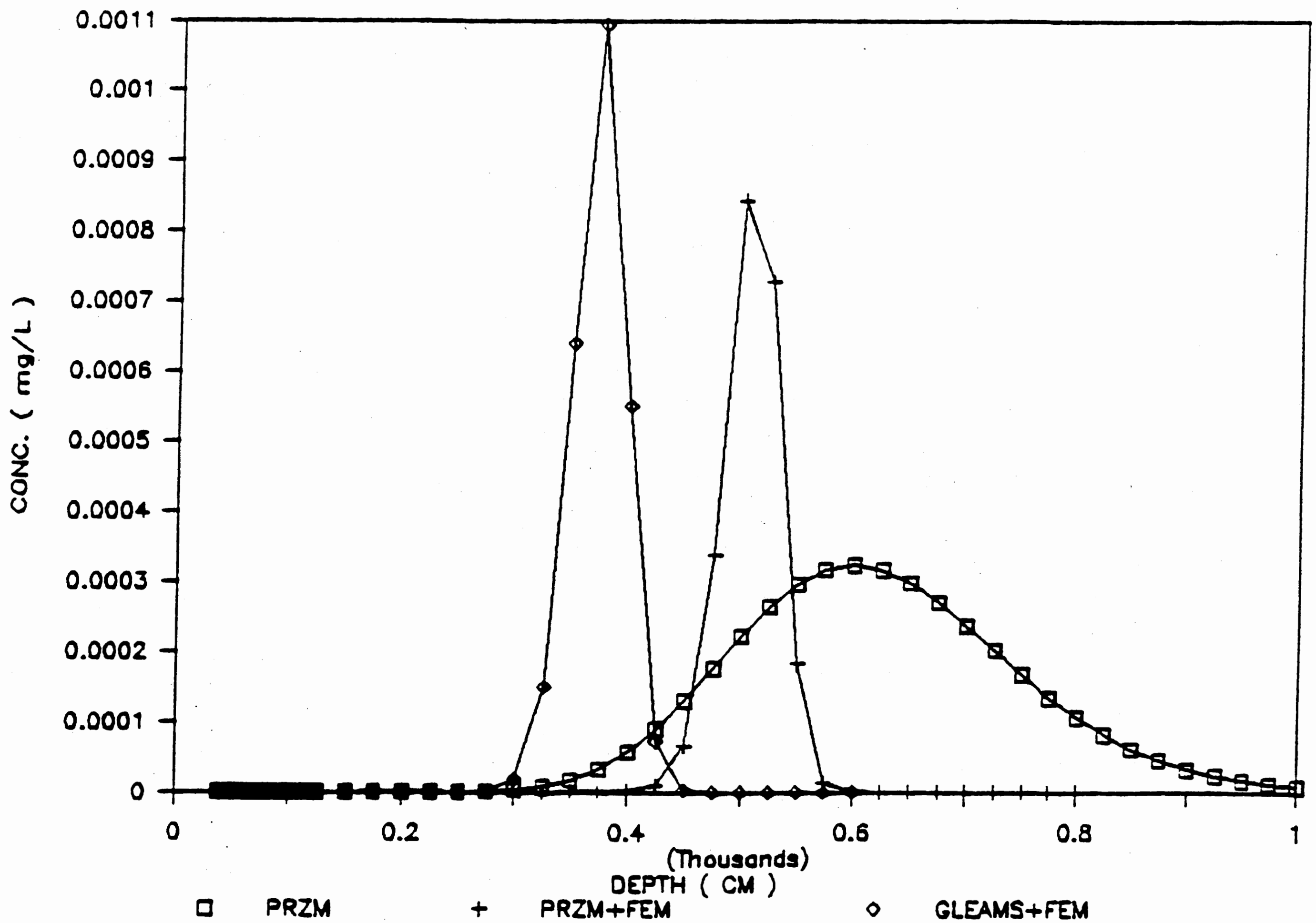

Figure (3). Concentration Profile of Dicamba Simulated By PRZM, PRZM+FEM and GLEAMS+FEM

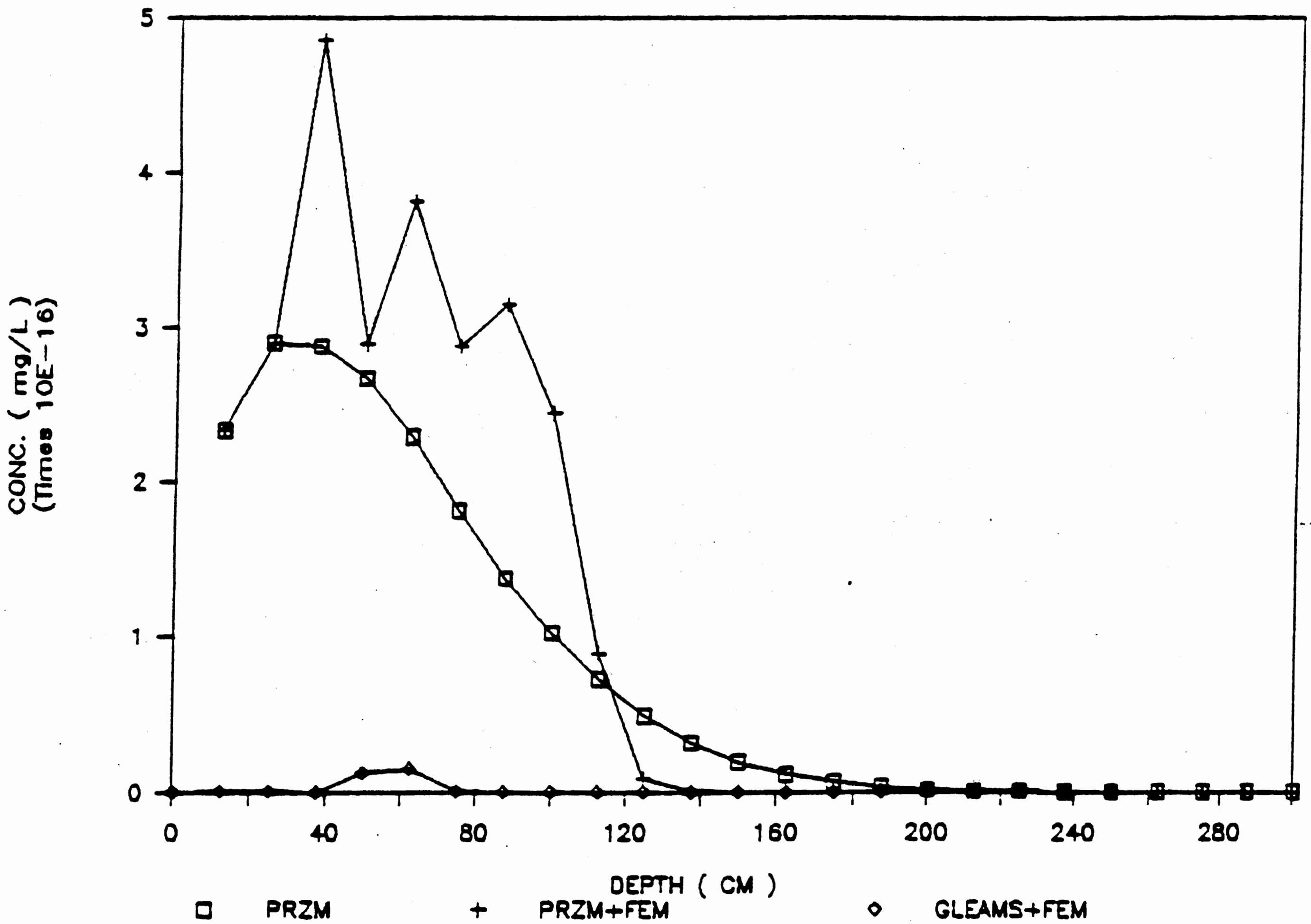

Figure (4). Concentration Profile of 2,4-D Simulated By PRZM, PRZM+FEM and GLEAMS+FEM

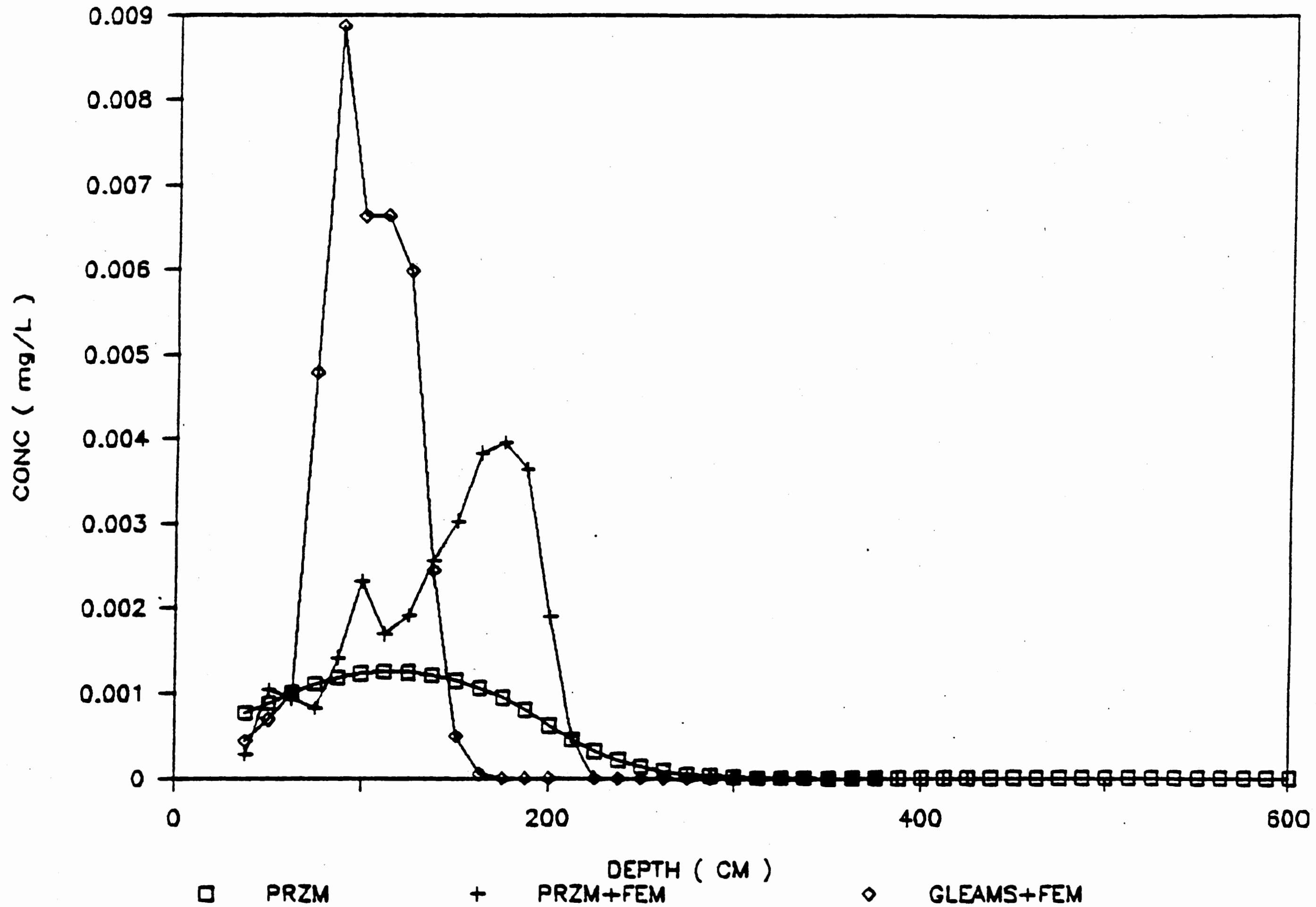

Figure (5). Concentration Profile of Atrazine Simulated By PRZM, PRZM+FEM and GLEAMS+FEM

Penetrated Depth of Peak Concentration

Table IX presents the depth penetrated by the peak concentration of Dicamba, 2,4-D, and Atrazine when simulated by PRZM, PRZM+FEM, and GLEAMS+FEM. These results revealed the vertical extent of pesticide movement in the subsurface at the end of one year of simulation time.

It was observed that the three models predicted different levels of pesticide leaching. PRZM tended to simulate greater leaching depth of Dicamba than did PRZM+FEM and GLEAMS+FEM, while PRZM+FEM predicted a greater level of Atrazine than did PRZM and GLEAMS+FEM.

Rainfall year revealed apparent influences on the three models. The three models simulated greater leaching depth of peak concentration in the high rainfall year than in the average and low rainfall years.

Curve number did not exert an apparent effect on the three models in estimating the leaching depth of peak concentration. PRZM and PRZM+FEM slightly responded to the curve number selection in the high rainfall year. GLEAMS+FEM did not have any response to the curve numbers used in the three rainfall years.

TABLE IX

PENETRATED DEPTH OF PEAK CONCENTRATION (CM)

		Penetrated Depth (cm)		
Pesticide	Conditions	PRZM	PRZM+FEM	GLEAMS+FEM
Dicamba	HI - CN:A	600.0	500.0	375.0
	HI - CN:B	612.5	525.0	375.0
	HI - CN:C	612.5	525.0	375.0
	AV - CN:A	362.5	350.0	200.0
	AV - CN:B	362.5	350.0	200.0
	AV - CN:C	375.0	350.0	200.0
	LO - CN:A	150.0	187.5	100.0
	LO - CN:B	150.0	187.5	100.0
	LO - CN:C	150.0	187.5	100.0
2,4-D	HI - CN:A	25.0	37.5	75.0
	HI - CN:B	25.0	37.5	75.0
	HI - CN:C	25.0	37.5	75.0
	AV - CN:A	12.5	50.0	50.0
	AV - CN:B	12.5	50.0	50.0
	AV - CN:C	12.5	50.0	50.0
	LO - CN:A	12.5	37.5	37.5
	LO - CN:B	12.5	37.5	37.5
	LO - CN:C	12.5	37.5	37.5
Atrazine	HI - CN:A	112.5	175.0	87.5
	HI - CN:B	112.5	175.0	87.5
	HI - CN:C	112.5	175.0	87.5
	AV - CN:A	50.0	112.5	37.5
	AV - CN:B	50.0	112.5	37.5
	AV - CN:C	50.0	112.5	37.5
	LO - CN:A	12.5	50.0	37.5
	LO - CN:B	12.5	50.0	37.5
	LO - CN:C	12.5	50.0	37.5

Soluble Mass of Pesticide

Table X shows the soluble mass of pesticide in the soil core below the root zone at the end of one year of simulation. These results represent the magnitude of soluble pesticide mass in the soil water and available for further transport in the subsurface.

It was observed that three models predicted different amounts of pesticide in solution, however the magnitudes were similar. PRZM+FEM tended to simulate a higher soluble mass of pesticide than did PRZM or GLEAMS+FEM.

Rainfall year revealed different effects on the three models in estimating the soluble mass of pesticide. PRZM predicted higher soluble mass of Dicamba in the high rainfall year, while, PRZM+FEM and GLEAMS+FEM simulated higher soluble mass of Dicamba in the low rainfall year. However, the three models consistently predicted more soluble mass of Atrazine in the high rainfall year than in the average and low rainfall years.

As before, curve number did not have significant influence on the three models in predicting the soluble mass of pesticide. PRZM and PRZM+FEM revealed slight responses to the selection of curve numbers. GLEAMS+FEM did not respond to the change of curve numbers in the average and low rainfall years.

TABLE X

SOLUBLE MASS OF PESTICIDE BELOW THE ROOT ZONE

		Soluble Mass (g/Ha)		
Pesticide	Conditions	PRZM	PRZM+FEM	GLEAMS+FEM
Dicamba	HI - CN:A	1.4549	1.1263	1.1725
	HI - CN:B	1.4550	1.1262	1.1701
	HI - CN:C	1.4550	1.1255	1.1681
	AV - CN:A	1.4529	1.6502	1.0813
	AV - CN:B	1.4540	1.6342	1.0813
	AV - CN:C	1.4544	1.6672	1.0813
	LO - CN:A	1.4284	2.2341	1.3490
	LO - CN:B	1.4358	2.2514	1.3490
	LO - CN:C	1.4384	2.2549	1.3490
2,4-D	HI - CN:A	.1716E-12	.2435E-12	.2496E-14
	HI - CN:B	.1757E-12	.2602E-12	.2496E-14
	HI - CN:C	.1812E-12	.2769E-12	.2496E-14
	AV - CN:A	.7397E-12	.8988E-10	.1825E-15
	AV - CN:B	.7522E-12	.9153E-10	.1825E-15
	AV - CN:C	.7666E-12	.9717E-10	.1825E-15
	LO - CN:A	.1452E-12	.3002E-13	.1100E-16
	LO - CN:B	.1487E-12	.3293E-13	.1100E-16
	LO - CN:C	.1510E-12	.3374E-13	.1100E-16
Atrazine	HI - CN:A	2.1959	5.5981	5.9399
	HI - CN:B	2.2251	5.7296	6.0917
	HI - CN:C	2.2569	5.8388	6.1321
	AV - CN:A	1.3127	3.622	1.4539
	AV - CN:B	1.3308	3.706	1.4539
	AV - CN:C	1.3503	3.8041	1.4539
	LO - CN:A	.3257	1.0768	.2454
	LO - CN:B	.3333	1.1346	.2454
	LO - CN:C	.3378	1.1567	.2454

Statistical Analysis

Statistical Comparisons For PRZM And GLEAMS. A summary of the analysis of variance (ANOVA) comparisons for PRZM and GLEAMS on the basis of pesticide leaching flux below the root zone are shown in Table XI. In this analysis, pesticide flux was referred to as the dependent variable (response variable), while two models (PRZM and GLEAMS), three pesticides, three rainfall years, and three curve numbers were referred to as independent variables.

TABLE XI

ANALYSIS OF VARIANCE FOR PESTICIDE LEACHING FLUX AT THE BASE OF THE ROOT ZONE

Source Of Independent Variables	Significance
Model	Significant
Pesticide	Significant
Rainfall	Significant
Curve Number	Non-Significant

Using a significance level of 0.05, the F values from statistical tables are 4.20 for models, and 3.34 for pesticides, rainfall years and curve numbers. If the f-test value was greater than the tabular F value, it could be concluded that the independent variable had significant influence on the response variable.

It was observed that PRZM and GLEAMS were statistically different in predicting pesticide flux at the base of the root zone. The pesticides selected and the rainfall years used in the simulations also contributed significant effects on the two models in estimating pesticide leaching flux. However, curve number did not exert a significant influence on the simulations.

Further statistical comparisons were completed by ANOVA comparisons to distinguish the differences between PRZM and GLEAMS under each individual condition of rainfall year and pesticide selection. The purpose of this approach was to identify if the difference between PRZM and GLEAMS was dependent upon individual rainfall year or upon the pesticide selected. A summary of the ANOVA comparisons for PRZM and GLEAMS is presented in Table XII. It was found that PRZM was statistically different from GLEAMS under each separate condition of rainfall year and pesticide selection.

TABLE XII

A SUMMARY OF ANOVA COMPARISONS FOR PRZM AND GLEAMS ON THE BASIS OF PESTICIDE FLUX IN EACH INDIVIDUAL CONDITION OF RAINFALL YEAR AND PESTICIDE

Conditions		PRZM Compared To GLEAMS
Pesticide	Dicamba	Significant
	2,4-D	Significant
	Atrazine	Significant
Rainfall	High	Significant
	Average	Significant
	Low	Significant

Statistical Comparisons For PRZM, PRZM+FEM and GLEAMS+FEM. A summary of the ANOVA comparisons for peak concentration, depth of peak concentration and the soluble pesticide mass are presented in Table XIII. It was observed that model selection was a significant factor in simulating peak concentration, depth of peak concentration and soluble mass in core. Pesticide and rainfall year also revealed significant effects on peak concentration, leached depth and soluble mass. However, curve number did not have a significant effect on any of the simulation results.

TABLE XIII

A SUMMARY OF ANOVA FOR PEAK CONCENTRATION, DEPTH OF PEAK CONCENTRATION AND SOLUBLE MASS OF PESTICIDE BELOW THE ROOT ZONE

Simulation Results	Significance of Independent Variables			
	Models	Pesticide	Rainfall	Curve No.
Peak Conc.	Sig.	Sig.	Non-Sig.	Non-Sig.
Leached Depth	Sig.	Sig.	Sig.	Non-Sig.
Soluble Mass	Sig.	Sig.	Sig.	Non-Sig.

In order to distinguish between true model effects and those resultings from extreme ranges in the data sets used, the collected information was subject to additional ANOVA comparisons after separating the individual rainfall year and pesticide selection from the overall data. Using a significance level of 0.05, the F value from statistical tables is 3.40 for each individual rainfall year and pesticide selected. Table XIV presents a summary of the ANOVA comparisons for PRZM, PRZM+FEM and GLEAMS+FEM in each individual condition of rainfall year and pesticide.

TABLE XIV

A SUMMARY OF ANOVA FOR PRZM, PRZM+FEM AND GLEAMS+FEM IN EACH INDIVIDUAL CONDITION OF RAINFALL YEAR AND PESTICIDE

Individual Condition		Comparisons For PRZM, PRZM+FEM and GLEAMS+FEM		
		Peak Conc.	Leaching Depth	Soluble Mass
Pesticide	Dicamba	Sig.	Non-Sig.	Sig.
	2,4-D	Sig.	Sig.	Sig.
	Atrazine	Sig.	Sig.	Non-Sig.
Rainfall	High	Non-Sig.	Non-Sig.	Non-Sig.
	Average	Non-Sig.	Non-Sig.	Non-Sig.
	Low	Non-Sig.	Non-Sig.	Non-Sig.

It was found that PRZM, PRZM+FEM and GLEAMS+GEM were not significantly different from each other under the individual condition of high, average and low rainfall years. However, the ANOVA comparisons indicated that the three models were significantly different from each other under each individual condition of Dicamba, 2,4-D and Atrazine. Therefore, Duncan's Multiple Range Test was applied to distinguish PRZM, PRZM+FEM and GLEAMS+FEM for each individual condition of pesticide selection.

Duncan's Multiple Range Test For PRZM, PRZM+FEM and GLEAMS+FEM. A summary of Duncan's Multiple Range Test for PRZM, PRZM+FEM and GLEAMS+FEM in each individual condition of pesticide selection is presented in Table XV. It was observed that PRZM was significantly different from PRZM+FEM in simulating the peak concentration of three pesticides. PRZM was significantly different from GLEAMS+FEM for Dicamba and Atrazine, while, PRZM+FEM was different from GLEAMS+FEM for 2,4-D.

It was observed that the three models were significantly different in simulating the leached depth of peak concentration for 2,4-D. PRZM+FEM was significantly different from GLEAMS+FEM in predicting the depth of peak concentration for Atrazine, while, PRZM was not different from GLEAMS+FEM.

It was also observed that PRZM was not significantly different from GLEAMS+FEM in simulating the soluble mass of the three pesticides. PRZM was significantly different from PRZM+FEM for 2,4-D and Atrazine, while PRZM+FEM was different from GLEAMS+FEM for Dicamba and 2,4-D.

TABLE XV

DUNCAN'S MULTIPLE RANGE TEST FOR PRZM, PRZM+FEM AND GLEAMS+FEM IN EACH INDIVIDUAL CONDITION OF PESTICIDE

		Duncan's Multiple Range Test		
Simulation Results	Individual Condition	PRZM vs. PRZM+FEM	PRZM vs. GLEAMS+FEM	PRZM+FEM vs. GLEAMS+FEM
Peak Conc.	Dicamba	Sig.	Sig.	Non-Sig.
	2,4-D	Sig.	Non-Sig.	Sig.
	Atrazine	Sig.	Sig.	Non-Sig.
Depth of Peak Conc.	Dicamba	Non-Sig.	Non-Sig.	Non-Sig.
	2,4-D	Sig.	Sig.	Sig.
	Atrazine	Sig.	Non-Sig.	Sig.
Soluble Mass	Dicamba	Non-Sig.	Non-Sig.	Sig.
	2,4-D	Sig.	Non-Sig.	Sig.
	Atrazine	Sig.	Non-Sig.	Non-Sig.

DISCUSSION

PRZM vs. GLEAMS

From the results presented in Table VII, and the statistical comparisons shown in Table XI, it was concluded that PRZM was statistically different from GLEAMS in predicting pesticide transport from the surface to the base of the root zone. PRZM tended to predict higher pesticide flux to the base of the root zone than did GLEAMS under the conditions of the rainfall years and pesticides chosen for simulation.

In order to further investigate the differences between PRZM and GLEAMS in simulating pesticide fluxes in the surface and the root zone, mass balance analyses were accomplished for PRZM and GLEAMS. In this effort, the individual pesticide mass delivered in surface runoff and erosion, transported with infiltration water, lost in dissipation and plant uptake, or stored in core was accounted for during a year of simulation. The mass balance analyses for PRZM and GLEAMS are presented in Table XVI.

It was found that pesticide losses in runoff and erosion were not significant when compared to the other partitions. PRZM predicted very little amount of pesticide losses in runoff and erosion for Dicamba and 2,4-D, while GLEAMS simulated no pesticide loss in runoff

TABLE XVI

COMPARISONS OF MASS BALANCE ANALYSES FOR PESTICIDE PARTITIONS BETWEEN PRZM AND GLEAMS (G/HA/YEAR) PESTICIDE APPLICATION: 1000 (G/HA/YEAR)

		Runoff		Erosion		Leaching		Decay		Uptake		Storage	
Pesticide	Condition	PRZM	GLEAMS	PRZM	GLEAMS	PRZM	GLEAMS	PRZM	GLEAMS	PRZM	GLEAMS	PRZM	GLEAMS
Dicamba	High - A	.2227E-1	0.0	.3281E-6	0.0	612.3	352.73	387.7	550.54	0.0	96.535	.3926E-13	0.0
	High - B	.6163E-2	0.0	.6576E-7	0.0	612.3	352.73	387.7	550.54	0.0	96.535	.3926E-13	0.0
	High - C	.4081E-2	0.0	.4809E-7	0.0	612.3	352.73	387.7	550.54	0.0	96.535	.3926E-13	0.0
	Avg. - A	.2362	0.0	.2503E-5	0.0	613.8	350.19	386.2	622.58	0.0	27.114	.1201E-7	0.0
	Avg. - B	.1018	0.0	.1362E-5	0.0	613.9	350.19	386.1	622.58	0.0	27.114	1201E-7	0.0
	Avg. - C	.05373	0.0	.8521E-6	0.0	613.9	350.19	386.1	622.58	0.0	27.114	.1201E-7	0.0
	Low - A	1.36	0.0	.1536E-4	0.0	221.3	124.897	778.7	856.79	0.0	18.036	.1572E-2	0.0
	Low - B	.5299	0.0	.7728E-5	0.0	222.1	124.897	777.9	856.79	0.0	18.036	.1572E-2	0.0
	Low - C	.2504	0.0	.433 E-5	0.0	222.4	124.897	777.6	856.79	0.0	18.036	.1572E-2	0.0
2, 4-D	High - A	.2058E-2	0.0	.5131E-5	0.0	6.625	.06011	993.4	997.146	0.0	2.293	.1623E-11	0.0
	High - B	.8797E-3	0.0	.2071E-5	0.0	6.626	.06011	993.4	997.146	0.0	2.293	.1623E-11	0.0
	High - C	.5743E-3	0.0	.1472E-5	0.0	6.626	.06011	993.4	997.146	0.0	2.293	.1623E-11	0.0
	Avg. - A	.5867E-3	0.0	.137 E-5	0.0	7.268	.01988	992.7	992.214	0.0	.3121	.2803E-11	0.0
	Avg. - B	.2442E-3	0.0	.7216E-6	0.0	7.268	.01988	992.7	992.214	0.0	.3121	.2803E-11	0.0
	Avg. - C	.1254E-3	0.0	.4356E-6	0.0	7.269	.01988	992.7	992.214	0.0	.3121	.2803E-11	0.0
	Low - A	.264 E-3	0.0	.6496E-6	0.0	.04541	.2046E-3	1000.0	999.779	0.0	.9346E-3	.429 E-11	0.0
	Low - B	.1003E-3	0.0	.3224E-6	0.0	.04557	.2046E-3	1000.0	999.779	0.0	.9346E-3	.429 E-11	0.0
	Low - C	.4574E-4	0.0	.177 E-6	0.0	.04563	.2046E-3	1000.0	999.779	0.0	.9346E-3	.429 E-11	0.0
Atrazine	High - A	7.411	0.0	.711 E-2	0.0	348.3	266.922	650.9	690.912	0.0	41.897	.7275	0.0
	High - B	5.368	0.0	.5384E-2	0.0	350.4	266.991	648.9	690.847	0.0	41.897	.7275	0.0
	High - C	3.985	0.0	.4166E-2	0.0	351.8	267.016	647.5	690.823	0.0	41.897	.7275	0.0
	Avg. - A	2.829	0.0	.3278E-2	0.0	251.5	139.699	745.9	845.217	0.0	12.968	2.605	2.0243
	Avg. - B	1.499	0.0	.2057E-2	0.0	254.8	139.699	742.6	845.217	0.0	12.968	2.605	2.0243
	Avg. - C	.8082	0.0	.123 E-2	0.0	255.5	139.699	741.9	845.217	0.0	12.968	2.605	2.0243
	Low - A	2.892	0.0	.3085E-2	0.0	115.0	43.4099	877.8	941.173	0.0	5.8246	7.150	9.5894
	Low - B	1.542	0.0	.1991E-2	0.0	116.4	43.4099	876.5	941.173	0.0	5.8246	7.150	9.5894
	Low - C	.8461	0.0	.1237E-2	0.0	117.1	43.4099	875.8	941.173	0.0	5.8246	7.150	9.5894

and erosion. The difference between PRZM and GLEAMS in predicting pesticide fluxes in the surface and the root zone appeared to exist in the pesticide partitions of leaching, decay and plant uptake. It was observed that leaching and decay were the main pesticide partitions in PRZM, while pesticide leaching, decay and plant uptake were the main components in GLEAMS. PRZM simulated no pesticide loss in plant uptake, while GLEAMS accounted 0.5% to 9.6% of the total pesticide mass for plant uptake. It was also observed that GLEAMS predicted much higher pesticide loss in decay in the root zone and lesser pesticide transported below the root zone than did PRZM.

PRZM and GLEAMS both used first-order decay rates to predict pesticide dissipation in soil and water for each daily time step. Any differences between PRZM and GLEAMS in predicting pesticide dissipation should be attributed to the manner in which these two codes partitioned pesticide mass available for degradation in the root zone. PRZM simulated higher rate of pesticide leaching below the root zone, resulting in lesser amounts of pesticide available for degradation in the root zone. GLEAMS predicted lower amounts of pesticide transported below the root zone than did PRZM, making more pesticide available for decomposition in the root zone.

A possible underlying reason for these results may exist in the manner in which these codes accounted for water in each of these simulations. Table XVII shows the water partitions in the surface and the root zone predicted by PRZM and GLEAMS. It was found that GLEAMS predicted a higher evapotranspiration rate than did PRZM. GLEAMS simulated about 49% of precipitation for evapotranspiration in the high rainfall year and 71% of precipitation for evapotranspiration in the low rainfall year, while PRZM predicted only 10.96 to 29.5%. These resulting evapotranspiration rates affect the amount of water available for infiltration. GLEAMS predicted higher rates of evapotranspiration, resulting in lower amouts of water for infiltration. PRZM simulated lower rates of evapotranspiration, resulting in higher amounts of water available for recharge below the root zone.

It was observed that PRZM simulated much more infiltration water below the root zone than did GLEAMS in the three rainfall years. In the high rainfall year PRZM predicted infiltration water about 1.57 times as much as that simulated by GLEAMS. In the average and low rainfall years PRZM accounted for 2.16 times as much as GLEAMS's prediction. Since water movement is the vector for pesticide transport, the difference between PRZM and GLEAMS in simulating infiltration water reflects on the prediction of pesticide leaching below the root zone. PRZM simulated more infiltration water than did GLEAMS, and therefore PRZM predicted more pesticide transported

TABLE XVII

WATER PARTITIONS IN THE SURFACE AND ROOT ZONE SIMULATED BY PRZM AND GLEAMS

	Surface Runoff (Cm/Year)		Evapotransportation (Cm/Year)		Infiltration (Cm/Year)	
Rainfall - CN	PRZM	GLEAMS	PRZM	GLEAMS	PRZM	GLEAMS
High - CN: A	8.299	1.022	11.87	56.03	88.11	56.59
High - CN: B	7.056	0.725	11.87	56.03	89.36	56.89
High - CN: C	5.332	0.631	11.87	56.03	91.08	56.99
Avg. - CN: A	2.152	0.00	12.35	44.38	50.95	23.80
Avg. - CN: B	1.687	0.00	12.09	44.38	51.52	23.80
Avg. - CN: C	1.116	0.00	12.09	44.38	52.09	23.80
Low - CN: A	.5699	0.00	8.365	22.10	19.43	8.90
Low - CN: B	.3289	0.00	8.365	22.10	19.67	8.90
Low - CN: C	.1775	0.00	8.365	22.10	19.83	8.90

below the root zone. GLEAMS predicted lesser amount of pesticide transported below the root zone than did PRZM, therefore more pesticide was available for decay in the root zone.

Based on the above inferences, it was suggested that the differences between PRZM and GLEAMS may originate from the fashions in which these two codes predicted evapotranspiration. Figure (6) presents the different fashions employed by the two codes in predicting evapotranspiration and the sequential influence on predicting pesticide partitions in the root zone. It was observed that the prediction of evapotranspiration can sequentially affect water partitions and pesticide leaching to the unsaturated zone. The other possible reasons causing differences may include the methods PRZM and GLEAMS used to solve pesticide transport in the subsurface.

Smith et al (1989) compared PRZM and GLEAMS for simulated chemical concentrations with observed field data [21]. It was found that GLEAMS predicted higher evapotranspiration and lower infiltration water than did PRZM [21], which was similar to the result of water partitions simulated in this study. However, in Smith's study, GLEAMS simulated higher leaching fluxes of Atrazine and Alachlor than did PRZM, and this simulation result is contrary to the pesticide partitions predicted in this study. Smith et al referred the differences between PRZM

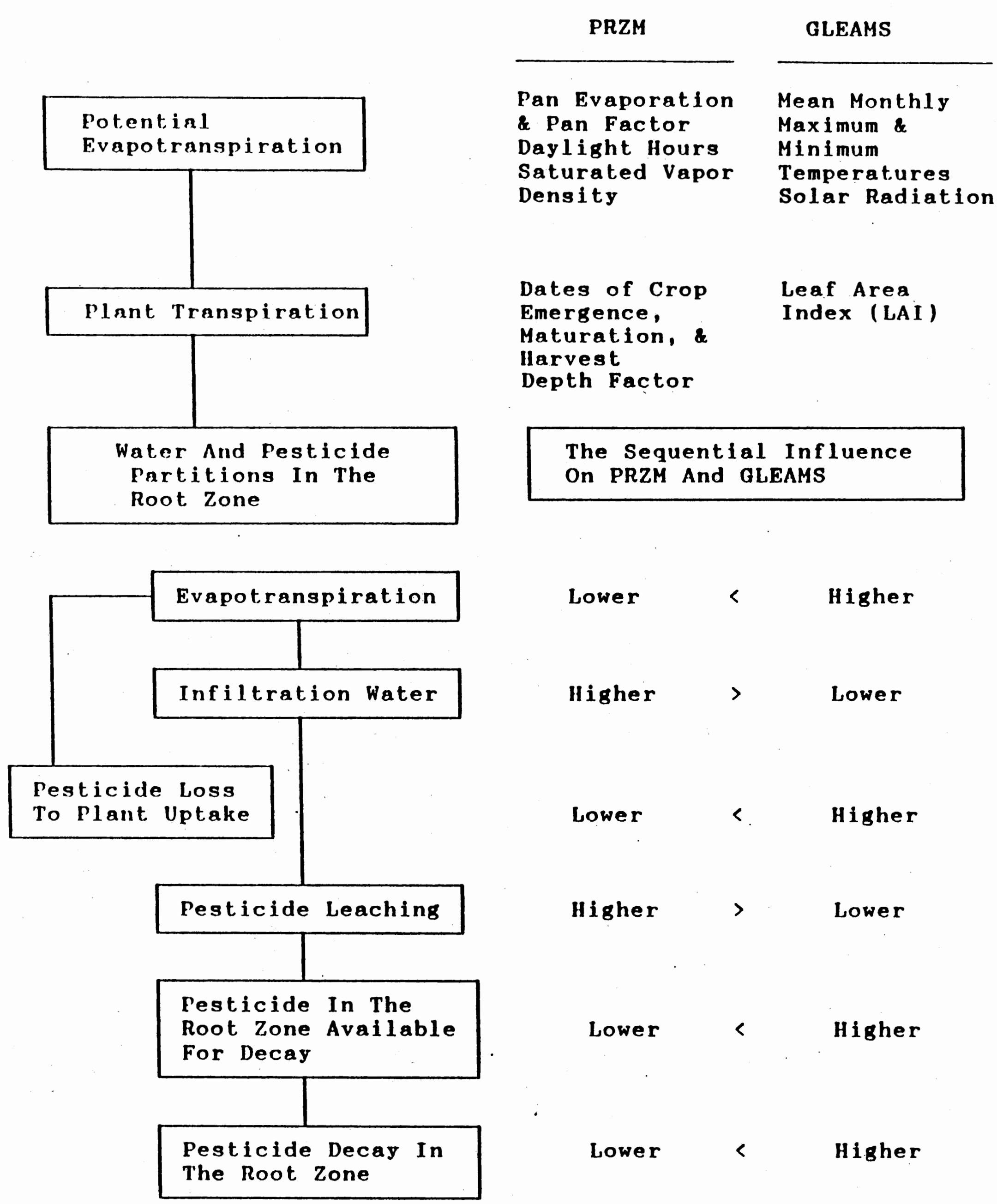

Figure (6). Comparisons Of PRZM And GLEAMS In Predicting Evapotranspiration And The Sequential Influence and GLEAMS to the manner in which these two codes accounted for flux of adsorbed chemicals [21].

PRZM used partition coefficient Kd to predict the fluxes of pesticide adsorbed, while GLEAMS used the distribution coefficient Koc. If the distribution coefficient Koc was over-estimated than Kd, GLEAMS would predict higher pesticide leaching fluxes than did PRZM even with lesser amounts of infiltration water. If the partition coefficients (Kd) were estimated from Koc, the two models should predict flux of adsorbed pesticide in a same rate. Then the differences between PRZM and GLEAMS in predicting pesticide leaching should attribute to the the manners these in which two codes accounted for water partition.

<u>PRZM vs. PRZM+FEM And GLEAMS+FEM</u>

According to the ANOVA comparisons, the difference between PRZM, PRZM+FEM and GLEAMS+FEM depended only upon the individual condition of pesticide selection, not upon the rainfall year. In each individual condition of rainfall year, PRZM, PRZM+FEM and GLEAMS+FEM were not significantly different from each other in simulating peak concentration, the leached depth of peak concentration and the soluble mass in core. If only pesticide selection was considered, three models were significantly different in some cases, while not different in others. In general, GLEAMS+FEM tended to predict higher peak concentration and shorter penetrated depth of peak concentration than did PRZM and PRZM+FEM, while, PRZM+FEM tended to predict greater depth of peak concentration and more soluble mass in core than did PRZM and GLEAMS+FEM.

<u>PRZM vs. PRZM+FEM.</u> PRZM and PRZM+FEM received identical amounts of infiltration water and pesticide flux below the root zone. Both PRZM and FEM employed a first-order decay rate to account for pesticide dissipation in soil and water. The difference between PRZM and PRZM+FEM should be derived from the different mathematical solution by which PRZM and FEM used to predict water movement and pesticide transport in the vadose zone. PRZM employed a backward-differential, implicit numerical scheme to solve the solute transport equation on the basis of a daily time step. The FEM used a Hermitian finite element solution to solve the partial differential equations for water and solute transport on a time step specified by user and the program itself. It was observed in Figure (3 - 5) that FEM simulated a sharp front of solute profile in the unsaturated zone, while PRZM gave a much smoother profile of solute concentration than did FEM. It was also found that the FEM tended to predict higher peak concentration, greater penetrated depth of peak concentration and more soluble mass in core than did PRZM.

<u>PRZM+FEM vs. GLEAMS+FEM.</u> The difference between PRZM+FEM and GLEAMS+FEM resulted from the different amount of infiltration water and pesticide flux predicted by PRZM and GLEAMS. Since GLEAMS predicted lower rate of infiltration water and lesser amount of pesticide leaching flux at the base of root zone than did PRZM, the pesticide was not able to leach deeper in the vadose zone. Therefore, GLEAMS+FEM tended to predict higher peak concentration, (i.e. less dilution water) shorter penetration depth, and lesser soluble mass in core than did PRZM+FEM.

<u>PRZM vs. GLEAMS+FEM.</u> The difference between PRZM and GLEAMS+FEM involved two factors: (1) the difference between PRZM and GLEAMS in estimating infiltration water and pesticide flux at the base of the root zone, and (2) the difference between PRZM and the FEM in simulating water movement and pesticide transport in the vadose zone. In general, GLEAMS+FEM tended to predict higher peak concentration, shorter leached depth of peak concentration and lesser soluble mass in core than did PRZM.

<u>Effect of Pesticide Selection</u>

Statistical comparisons indicated that pesticide selection was a significant factor for PRZM and GLEAMS. PRZM was significantly different from GLEAMS in simulating the leaching fluxes of the three pesticides at the base of the root zone in each individual condition of pesticide selection. Pesticide selection was also a significant factor for PRZM, PRZM+FEM and GLEAMS+FEM in predicting pesticide transport in the subsurface. In the individual condition of pesticide selection, the differences between the three models were diverse. PRZM was significantly different to PRZM+FEM in most of the individual conditions of pesticide selection, while PRZM was not significantly different to GLEAMS+FEM in some of the conditions.

Effect of Rainfall

ANOVA outputs indicated that precipitation was a significant factor for PRZM and GLEAMS in simulating pesticide transport from the surface to the base of root zone. Precipitation was also a significant factor for PRZM, PRZM+FEM and GLEAMS+FEM in predicting pesticide transport below the root zone. In high rainfall year, more infiltration water is available to transport pesticide below the root zone, therefore lower peak concentration and greater depth of peak concentration are predicted. However PRZM, PRZM+FEM and GLEAMS+FEM were not statistically different from each other when the same annual precipitation record was used.

Effect of Cropping Practices

According to the simulation results and statistical comparisons, curve number as used in this research was not a significant factor in predicting pesticide leaching. This may result because the three curve number selected for this effort were very similar, as they were chosen from the site specific information previously described.

Model Applicability

It was concluded that PRZM was significantly different from GLEAMS in predicting pesticide transport in the surface and root zone. PRZM was not interchangeable with GLEAMS in evaluating groundwater contamination from pesticide application under various climatic condition and pesticide selection.

Regarding to ease of model application and input data availability, PRZM seemed to be more convenient than GLEAMS. PRZM employed a minimum amount of specific field data to allow a reasonable prediction of pesticide transport in the surface and subsurface. Most of the required input data was available from PRZM User's Manual or existing sources. GLEAMS was employed as an alternative to PRZM in this research to simulate pesticide leaching. When compared to PRZM, GLEAMS required more specialized field data to allow simulations of pesticide transport in a field size area.

Referring to a worst case of pesticide contamination, PRZM seemed to be a more conservative choice for simulating the impact of pesticide application. PRZM predicted higher pesticide flux delivered below the root zone than did GLEAMS under various climatic condition and pesticide selection. At this moment, PRZM appealed to be more competent than GLEAMS in evaluating pesticide threats to groundwater system. However, it is recommended to calibrate these codes with empirical data before a more reliable prediction could be applied to agricultural management practices.

Mass balance analysis was also applied to investigate the difference between PRZM and PRZM+FEM in the same fashion as that for PRZM and GLEAMS. The FEM source code was modified to output pesticide loss in decay and storage in the core. This effort was accomplished by computing the pesticide partitions in decay and storage on the basis of a time step specified by user and the program itself, and then these series of partitions were accumulated to obtain an annual pesticide balance. However, it was found that the output of pesticide loss in decay and storage below the root zone was not compatible to the pesticide input from the root zone. It was also observed that the concentration output had oscillation between positive and negative values.

Further effort was attempted in applying mass balance analysis to the sample calculations presented in the FEM manual (SUMATRA1 Manual). It was found that the original pesticide outputs supplied by the software dealer was also not compatible with the input used in the example problem. Due to insufficient documentation concerning the calculation mechanism and the variables applied in the source code, further applications of the program was not possible.

CONCLUSIONS

The objectives of this research were to compare several readily available models in terms of their abilities to simulate pesticide transport from the ground surface to the root zone as well as to the top of the saturated groundwater system. Three pesticides, three rainfall years and three curve numbers were employed as independent variables for simulation. The GLM procedure in the SAS program, other ANOVA procedures and the Duncan's Multiple Range Test were applied to statistically compare the simulation results to evaluate the difference between the respective modeling approaches.

PRZM and GLEAMS were evaluated in terms of their abilities to simulate pesticide transport from the surface to the base of the root zone under various climatic and agronomic conditions. The ANOVA comparisons indicated that PRZM was statistically different from GLEAMS in simulating pesticide leaching flux at the base of the root zone. PRZM predicted higher leaching flux than did GLEAMS under each individual test condition. It was also found that PRZM predicted lower rates of evapotranspiration and higher rates of infiltration below the root zone than did GLEAMS. The difference between PRZM and GLEAMS in partitioning water in the surface and subsurface was considered to be a significant underlying reason for the differences observed in these simulations. In a summary, PRZM was not interchangeable with GLEAMS in predicting pesticide delivered in the surface and to the base of the root zone. When compared to GLEAMS, PRZM appealed to be more convenient in model application and more conservative in evaluating pesticide impact to groundwater system.

PRZM, PRZM+FEM and GLEAMS+FEM were evaluated in terms of their abilities to simulate pesticide transport to the depth equivalent to a saturated groundwater system. The FEM was employed as an alternative to PRZM in simulating water movement and pesticide transport in the vadose zone. The simulation results including peak concentration, the penetrated depth of peak concentration and the soluble mass in core were statistically compared to evaluate the differences between the three models. The ANOVA comparison indicated that PRZM, PRZM+FEM and GLEAMS+FEM were not significantly different from each other under the individual conditions of rainfall year selection. However the three models were statistically different from each other when the pesticides were evaluated separately.

The difference between PRZM, PRZM+FEM appeared to result from the different mathematical solutions used by PRZM and FEM in solving the partial differential equations for water and solute transport in the subsurface. In general, PRZM+FEM tended to predict higher peak concentration, greater depth of peak concentration and more soluble mass in core than did PRZM. The difference between PRZM+FEM and GLEAMS+FEM derived from the different amount of infiltration water and pesticide leaching flux below root zone predicted by PRZM and GLEAMS for FEM as boundary conditions. In general, GLEAMS+FEM tended to predict higher peak concentration, shorter leached depth of peak concentration and lesser amount of soluble mass in core than did PRZM+FEM.

The difference between PRZM and GLEAMS+FEM involved (1) the differences between PRZM and GLEAMS in predicting water movement and pesticide leaching, and (2) the different mathematical methods by which PRZM and FEM used to simulate water movement and pesticide transport in the subsurface. In a summary, PRZM, PRZM+FEM and GLEAMS+FEM gave similar results when the same annual precipitation record was used. However, the three models were not interchangeable in simulating pesticide transport in the vadose zone when pesticides were evaluated separately.

One of the original goals of this study was to evaluate the utility of public domain softwares in direct application to a typical simulation. At this time a significant finding of this research indicated that the SUMATRA1 code, as delivered by the International Ground Water Modeling Center was difficult to use, gave questionable results and was poorly supported. The only software used in this effort which could be recommended for use without extensive modifications were the PRZM and GLEAMS codes.

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APPENDIX A

INPUT DATA FOR PRZM, GLEAMS, PRZM+FEM AND GLEAMS+FEM

TABLE XVIII

INPUT PARAMETERS FOR PRZM

Card No.	Input Data	Description Of Parameters
1		TITLE
	*** PRZM DATA SET FOR OKLAHOMA CONVENTIONAL TILLAGE WHEAT ***	
2		ISDAY, ISMON, ISTYR, IEMON, IEDAY, IEYR
	01	ISDAY: Starting date of simulation.
	02	ISMON: Starting month of simulation.
	...	ISTYR: Starting year of simulation.
	31	IEDAY: Ending date of simulation.
	12	IEMON: Ending month of simulation.
	...	IEYR : Ending year of simulation.
	High Rainfall Year: 1957 Average Rainfall Year: 1969 Low Rainfall Year: 1954	
3		HTITLE: Title of hydrological information.
	*** HYDROLOGICAL PARAMETERS FOR HIGH RAINFALL YEAR, 1954 ***	
4		PFAC, SFAC, IPEIND, ANETD, INICRP, ISCOND
	0.70	PFAC: Pan factor, dimensionless.
	0.457	SFAC: Snow factor.
	2	IPEIND: Pan evaporation flag.
	17.5	ANETD: Minimum depth, cm, in which evaporation is extracted.
	1	INICRP: User specified initial crop number.
	3	ISCOND: User specified surface condition after harvest corresponding to INICRP.
4A		DT: Average daily hours of daylight for each month.
	9.9 10.7 11.8 12.9 13.9 14.4 14.1 13.7 12.2 11.1 10.1 9.6	
5	1	ERFLAG: Erosion flag.
5A		USLEK, USLELS, USLEP, AFIEID, TR
	0.17	USLEK: Soil erodibility parameter (K).
	0.14	USLELS: Topographic factor (LS).
	0.3	USLEP: Supporting practice factor (P).
	1.0	AFIELD: Area of field or plot (Ha)
	4.5	TR: Average duration of runoff hydrograph from runoff producing storms.

TABLE XVIII (Continued)

Card No.	Input Data	Description Of Parameters
6	1	NDC: Number of different crops used in simulation.
7		ICNCN, CINTCP, AMXDR, COVMAX, ICNAH, CN, USLECM, WFMAX
	1	ICNCN: Crop number.
	0.15	CINTCP: Maximum interception storage of the crop.
	22.5	AMXDR: Maximum active root depth of the crop.
	0.85	COVMAX: Maximum area coverage of the crop at full canopy (%).
	3	ICNAH: Soil surface condition after crop harvest.
	...	CN: Runoff curve number. Refer to Table VI.
	0.3 0.1 0.2	USLEC: Universal soil loss equation cover management factor.
8	1	NCPDS: Number of cropping periods in the simulation.
9		EMD, EMM, IYREM, MAD, MAM, IYRMAT, HAD, HAM, IYRHAR, INCROP.
	01	EMD: Day of the month of crop emergence.
	02	EMM: Month of crop emergence.
	54	IYREM: Year of crop emergence.
	20	MAD: Day of the month of crop maturation.
	04	MAM: Month of crop maturation..
	54	IYRMAT: Year of crop maturation.
	15	HAD: Day of the month of crop harvest.
	06	HAM: Month of crop harvest.
	54	IYRHAR: Year of corp harvest.
	1	INCROP: Crop number of crop growing in current period.
10		PTITLE: Title of pesticide information.
	*** PESTICIDE APPLICATION OF : DICAMBA ***	
11	1	NAPS: Number of pesticide applications.
12		APD, APM, IAPYR, TAPP, DEPI
	02	APD: Day of the month of pesticide application.
	02	APM: Month of pesticide application.
	54	IAPYR: Year of pesticide application.
	1.0	TAPP: Total pesticide application.
	10.0	DEPI: Depth of pesticide incorporation.

TABLE XVIII (Continued)

Card No.	Input Data	Description Of Parameters
13	1	FAM: Pesticide application model.
14		STITLE: Title of soil information.
	*** SOIL PARAMETERS OF GRANT COUNTY, OKLAHOMA ***	
15		CORED, UPTKF, NCOM2, BDFLAG, THFLAG, KDFLAG, HSWZT
	2000	CORED: Total depth of soil core (cm).
	...	UPTKF: Plant uptake efficiency factor. Referred to Table III.
	160	NCOM2: Total number of simulation compartments in the soil core.
	0	BDFLAG: Bulk density flag.
	0	THFLAG: Calculation flag for soil field capacity and wilting point water contents.
	0	KDFLAG: Calculation flag for soil/pesticide sorption partition coefficients.
	0	HSWZT: Switch for soil hydraulics.
16	4	NHORIZ: Total number of soil horizons.
17		HORIZN, THKNS, BD, DISP, DKRATE, THETO
	1 - 4	HORIZN: Soil horizon number.
		THKNS: Soil horizon thickness (cm).
	0-22.9	22.9-58.0 58.0-102.0 102.0-1817.0
		BD: Soil bulk density.
	1.488	1.554 1.578 1.60
	0.0	DISP: Hydrodynamic dispersion.
	...	DKRATE: Pesticide decay rate in the soil (1/day) Referred to Table III.
		THETO: Initial soil water content in the horizon.
	0.0973	0.06885 0.08678 0.1122
17A		THEFC, THEWP, KD, OC
		THEFC: Field capacity soil water content of the horizon.
	0.1312	0.0923 0.1112 0.1465
		THEWP: Wilting point soil water content of the horizon.
	0.0634	0.0454 0.06236 0.0779
	...	KD: Soil/pesticide sorption partition coefficient of the horizon. Referred to Table IV.
		OC: Organic carbon content of soil horizon.
	0.92	0.17 0.12 0.20

TABLE XVIII (Continued)

Card No.	Input Data	Description Of Parameters
18		ILP, CFLAG
	0	ILP: Initial level of pesticide indicator.
	1	CFLAG: Conversion flag for initial pesticide level input.
19		ITEM1, STEP1, LFREQ1, ITEM2, STEP2, LFREQ2, ITEM3, STEP3, LFREQ3
	WATR	ITEM1: Hydrologic output summary indicator.
	YEAR	STEP1: Time step of hydorlogic output.
	2	LFREQ1: Frequency of soil compartment reporting.
	PEST	ITEM2: Pesticide output summary indicator.
	YEAR	STEP2: Time step of pesticide output.
	2	LFREQ2: Frequency of soil compartment reporting.
	CONC	ITEM3: Pesticide concentration profile indicator.
	YEAR	STEP3: Time step of pesticide output.
	2	LFREQ3: Frequency of soil compartment reporting.
20	1	NPLOTS: Number of time series to be written to plotting file.
21		PLNAME, MODE, IARG, CONST
	RZFX	PLNAME: Identifier of time series.
	TCUM	MODE: Plotting mode.
	0	IARG: Argument of variable identified in PLNAME.
		CONST: Specifies a constant with which user can multiply the times series for unit conversion.

TABLE XIX

INPUT FILE OF HYDROLOGY PARAMETERS FOR GLEAMS

Card	Input Data	Description Of Parameters
1 - 3		Title
	*** GLEAMS HYDROLOGY PARAMETERS FILE ***	
	*** HIGH RAINFALL YEAR, 1957 ***	
	*** CN: A ***	
4		HBDATE, HYDOUT, IROPT, FLGNUT, FLGPST, FLGGEN
	57001	HBDATE: The beginning date (year and Julian day) for hydrology simulation.
	High Rainfall Year: 1957, Average: 1969, Low: 1954	
	1	HYDOUT: For storm-by-storm hydrology output.
	0	IROPT: Irrigation is not to be applied by the model.
	0	FLGNUT: Nutrients are not to be simulated.
	1	FLGPST: Pesticides are to be simulated.
	0	FLGGEN: Climatic data are to be read.
5		DACRE, RC, BST, CONA, CN2, CHS, WLW, RD
	2.471	DACRE: Total drainage area of the field (acres).
	0.6	RC: Effective saturated conductivity of the soil.
	0.0973	BST: Fraction of available water content that is filled when simulation begins.
	3.3	CONA: Soil evaporation parameter.
		CN2: SCS curve number for moisture condition II.
	CN A: 63	CN B: 59 CN C: 57
	0.005	CHS: Hydraulic slope for the field.
	1	WLW: Ratio of watershed length-to-width.
	8.86	RD: Effective rooting depth (in).
6		NOSOHZ, BOTHOR(I) for I=1 to NOSOHZ
	1	NOSOHZ: Number of soil horizons in the root zone.
	8.86	BOTHOR: Bottom of each soil horizons (in).
7	0.438	POR(I): Soil porosity for each of the soil horizon, I= 1 to NOSOHZ on Card 6.
8	0.1312	FC(I): Field capacity for each of the soil horizon, I=1 to NOSOHZ on Card 6.
9	0.0634	BR15(I): Wilting point for each of the soil horizon, I= 1 to NOSOHZ on Card 6.

TABLE XIX (Continued)

Card	Input Data		Description Of Parameters					
10	0.92		OM(I): Organic matter content for each of the soil horizon, I= 1 to NOSOHZ on Card 6.					
11, 12			TEMPX(1 - 12): Mean monthly maximum temperatures.					
	46.9	53.0	61.6	73.0	81.6	91.6	96.5	95.2
	86.4	75.9	59.9	49.7				
13, 14			TEMPN(1-12): Mean monthly temperatures.					
	22.6	27.4	34.8	46.5	56.0	65.6	70.3	68.6
	60.6	48.7	35.7	26.4				
15, 16			RAD(1-12): Mean monthly solar radiation values.					
	205.0	289.0	390.0	454.0	504.0	600.0	596.0	545.0
	455.0	354.0	269.0	209.0				
17	0.5		GR: Winter cover factor to reflect soil evaporation.					
18			LDATE: Date (Julian day). AREA: Leaf area index (LAI).					
	001	0.00						
	032	0.00						
	045	0.47						
	059	0.90						
	073	0.90						
	086	0.90						
	100	0.90						
	113	1.62						
	127	3.00						
	140	3.00						
	153	0.96						
	166	0.00						
	366	0.00						
19			NEWT, NEWR, NEWL					
	-1		NEWT: Stop the program.					
	0		NEWR: Use the same radiation values from the previous year.					
	0		NEWL: Use the same LAI data from the previous year.					

TABLE XX

INPUT FILE OF EROSION PARAMETERS FOR GLEAMS

Card	Input Data	Description Of Parameters
1 - 3		Title
	*** GLEAMS EROSION PARAMETERS FILE ***	
	*** HIGH RAINFALL YEAR, 1957 ***	
	*** CN: A ***	
4		BYEAR, EYEAR, EROOUT, FLGUPD, FLGSEQ, FLGPRT, NPART
	57	BYEAR: Last two digits of the year when simulation begins.
	57	EYEAR: Last two digits of the year when simulation ends.
	High Rainfall	Year: 1957, Average: 1969, Low: 1954
	2	EROOUT: For abbreviated monthly and annual summary output.
	0	FLGUPD: The initial annual parameter inputs are to be reused after the period of rotation is completed.
	1	FLGSEQ: This flag indicates the execution sequence of erosion/sediment submodels as follows: overland.
	0	FLGPRT: The particle specifications (sediment) are to be computed by the model using default values.
	0	NPART: The number of particle types (sediment) to be read in.
5		KINVIS, NBAROV, WTDSOI, KCH, NBARCH, YALCON
	1.21E-5	KINVIS: Kinematic viscosity (default value).
	0.01	NBAROV: Manning's "n" for bare soil in the overland flow (default value).
	92.7	WTDSOI: Weight density of soil.
	0.135	KCH: Soil erodibility for erosion by concentrated flow in a channel.
	0.03	NBARCH: Manning's "s" for bare soil in channel flow (default).
	0.88	YALCON: Yalon constant for sediment transport.
6		SOLCLY, SOLSLT, SOLSND, SOLORG, SSCLY, SSSLT, SSSND, SSORG
	0.05	SOLCLY: Fraction of clay in the surface soil layer exposed to erosion.
	0.043	SOLSLT: Fraction of silt in the surface soil layer exposed to erosion.

TABLE XX (Continued)

Card	Input Data	Description Of Parameters
6 (Continued)	0.907	SOLSND: Fraction of sand in the surface soil layer exposed to erosion.
	0.0092	SOLORG: Fraction of organic matter in the surface soil layer exposed to erosion.
	20.0	SSCLY: Specific surface area of clay particles.
	4.0	SSSLT: Specific surface area of silt particles.
	0.05	SSSND: Specific surface area of sand particles.
	1000.0	SSORG: Specific surface area of organic matter.
8		DAOVR, SLNGTH, AVGSLP, SB, SM, SE, XIN(3), YIN(3), XIN(4), YIN(4)
	2.471	DAOVR: Drainage area (acres) represented by overland flow profile.
	328.0	SLNGTH: Slope length of representative overland flow profile.
	0.005	AVGSLP: Average slope of representative overland flow profile.
	0.005	SB: Slope at the upper end of the profile.
	0.005	SM: Slope of the mid-section.
	0.005	SE: Slope at the lower end of the profile.
	328.0	XIN(3): Horizontal distance from top of slope to the point where the uphill end of the mid-uniform section begins.
	0.0	YIN(3): Elevation of the point at the uphill end of the mid-uniform section.
	328.0	XIN(4): Horizontal distance from top of slope to the point where the downhill end of the mid-uniform section.
	0.0	YIN(4): Elevation of the point at the downhill end of the mid-uniform section.
9		NXK, XSOIL(I), KSOIL(I), for I= 1 to NXK
	1	NXK: Number of slope segments differentiated by changes in soil erodibility factor.
	1.0	XSOIL(I): Relative horizontal distance from the top of the slope to the bottom of the segment i.
	0.17	KSOIL(I): Soil erodibility factor for slope segment just above XSOIL(I).
16	1	NYEARS: The number of years in this rotation.
17		CDATE(J) for J= 1 to 10 : The days (Julian) on which sets of parameters take effect.
	001 045 083 145 169 187 226 250 311 335	

TABLE XX (Continued)

Card	Input Data		Description Of Parameters					
18			NXF, XFACT(I) for I= 1 to NXF					
	1		NXF: Number (1 to 9) of overland flow profile segments differentiated by changes in the overland flow updatable (annual) parameters.					
	1.0		XFACT(I): Relative horizontal distance from top of overland flow profile to the bottom of segment i.					
19			CFACT(I,J) for J= 1 to the number of dates per year: Soil loss ratio for overland flow profile segment just above XFACT(I)					
	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
	0.26	0.26						
20			PFACT(I,J) for J= 1 to the number of dates per year: Contouring factor for overland flow profile segment just above XFACT(I).					
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	0.6	0.6						
21			NFACT(I,J) for J= 1 to the number of dates per year: Manning's "n" for overland flow profile segment just above XFACT(I).					
22			NXC, XCHAN(I) for I= 1 to NXC					
	1		NXC: Number of channel profile segments differentiated by changes in the channel parameters.					
	1.0		XCHAN(I): Relative horizontal distance from top of channel to the bottom of the segment.					
23			NCHAN(I,J) for J= 1 to the number of dates per year: Manning's "s" for channel profile segment just above XCHAN(I).					
	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065
	0.065	0.065						
24			CCHAN(I,J) for J= 1 to the number of dates per year: Critical shear stress for channel profile segment just above XCHAN(I).					
	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	0.40	0.40						

TABLE XX (Continued)

Card	Input Data	Description Of Parameters
25		SCHAN(I,J) for J=1 to the number of dates per year: Depth to the nonerodible layer along the channel side in the channel profile segment just above XCHAN(I).
	0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.33	
26		DCHAN(I,J) for J= 1 to the number of dates per year: Depth to the nonerodible layer in the channel middle, for the channel profile segment just above XCHAN(I).
	-0.33 -0.33 -0.33 -0.33 -0.33 -0.33 -0.33 -0.33 -0.33 -0.33	
27		WCHAN(I,J) for J= 1 to the number of dates per year: Top width of the channel for the channel profile segment just above XCHAN(I).
	-10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0	

TABLE XXI

INPUT FILE OF PESTICIDE PARAMETERS FOR GLEAMS

Card	Input Data	Description Of Parameters
1 - 3		Title
	*** GLEAMS PESTICIDE PARAMETERS FILE *** *** HIGH RAINFALL YEAR, 1957 *** *** CN: A ***	
4		PBDATE, PEDATE, NPEST, IROT, PSTOUT, PSTPAS, GPHOUT
	57031	PBDATE: The Julian date that the model is to begin pesticide simulation.
	57365	PEDATE: The Julian date that the model is to stop considering pesticides.
	1	NPEST: Number of different pesticides considered in the simulation.
	1	IROT: Number of years in a rotation cycle.
	1	PSTOUT: For monthly and annual summary output.
	1	PSTPAS: A pesticide mass pass file is to be created.
	2	GPHOUT: Creats file of accumulated annual pesticide mass loss in runoff, in sediment, in percolation, and total mass loss, for all pesticides.
5		NOPEST, PSTNAM, FLGRES, METAB
	1	NOPEST: Pesticide identification number.
	Dicamba Atrazine 2,4-D	PSTNAM: Pesticide name. (only one pesticide for each simulation)
	0	FLGRES: Flag to indicate whether pesticide residue exists in the soil when simulation begins.
	0	METAB: Number of metabolites of a particular pesticide.
6		NOPEST, H2OSOL, HAFLIF, SOLLIF, KOC, FOLRES, WSHFRC, COFTRN, COFUP
	1	NOPEST: Pesticide identification number.
	...	H2OSOL: Water solobility (ppm). Referred to Table III.
	...	HAFLIF: Soil half life of pesticide. Referred to Table III.
	...	KOC: Partition coefficient, ratio of the concentration of pesticide in organic matter to concentration of pesticide in water. Referred to Table III.

TABLE XXI (Continued)

Card	Input Data	Description Of Parameters
6 (Continued)	0.0	FOLRES: Amount of pesticide residue on the foliage.
	0.0	WSHFRC: Fraction of pesticide on the foliage available for rainfall washoff.
		COFTRN: Coefficient of transformation from parent compound to metabolite, or metabolite to metabolite.
	...	COFUP: Coefficient of pesticide uptake by plants. Referred to Table III.
8		PDATE, CDATE, IPST
	1032	PDATE: First date on which the pesticide parameters on Card 9 are valid.
	2031	CDATE: Last date on which the pesticide parameters on Card 9 are valid.
	1	IPST: The number of pesticide applied on PDATE.
9		NOPEST, APRATE, DEPINC, FOLFRC, SOLFRC, THRWSH, METH
	1	NOPEST: Pesticide identification number.
	1.0	APRATE: Rate of application (Kg/Ha) of active ingredient.
	10.0	DEPINC: Depth of incorporation (cm).
	0.0	FOLFRC: Fraction of pesticide applied to the foliage.
	1.0	SOLFRC: Fraction of pesticide applied to the soil.
	0.0	WSHTHR: Rainfall threshold for foliage washoff.
	1	METH: Code for method of application: incorporation.

TABLE XXII

INPUT PARAMETERS FOR FEM

Card No.	Input Data	Description of Parameters
1 - 3		Title
	*** SUMATRA-1 INPUT PARAMETERS FOR SIMULATION CONTROL *** *** SOIL LAYER : 4, DEPTH = 1350 CM *** *** SIMULATION TIME = 320 DAYS ***	
4		NN, NSTEPS, DELT, DELMIN, DELMAX, TMAX, PRDEL, PULSE, DRAIN
	59	NN: Number of nodes.
	5000	NSTEPS: Maximum number of time steps (days).
	0.0005	DELT: Initial time step (days).
	0.00005	DELMIN: Minimum permitted time step (days).
	0.5	DELMAX: Maximum time step (days).
	320.0	TMAX: Maximum simulation time (days).
	80.0	PRDEL: Time increment for print-out (days).
	0.0	PULSE: Time switch for soil surface boundary condition (days).
	0.0	DRAIN: Drainage rate (cm/day).
5		KRAIN, KDRAIN, KOD1, KOD2, KOD3, KOD4, EPSI, TOL1, TOL2
	1	KRAIN: Rainfall code, the infiltration rate is specified.
	2	KDRAIN: Drainage code, drainage rate is specified.
	0	KOD1: Output code for printing pressure heads and concentration after each iteration and time step.
	0	KOD2: Input code, initial moisture contents are read in and converted to pressure heads.
	4	KOD3: Output code, the soil-hydraulic properties of the first 4 soil types are printed.
	0	KOD4: Specifies both flow and solute transport equations are to be solved.
	0.5	EPSI: Weighting coefficient for finite difference approximation of the time derivative in flow equation.
	0.5	TOL1: Absolute convergence criterion.
	0.0	TOL2: Relative convergence criterion.

TABLE XXII (Continued)

Card No.	Input Data	Description of Parameters
6		I: Nodal number. ISPR(I): Soil property index of node i. X(I): Coordinate of node I. P(2I-1): Initial moisture content. P(2I): Initial moisture gradient. C(2I-1): Initial concentration. C(2I): Initial concentration gradient. INT(I): Interpolation index for element I.

I	ISPR(I)	X(I)	P(2I-1)	P(2I)	C(2I-1)	C(2I)	INT(I)
1	2	0.0	0.06885	0.0	0.0	0.0	1
2	2	12.5	0.06885				
3	2	25.0	0.06885				
4	2	37.5	0.06885				
5	2	50.0	0.06885				
6	3	62.5	0.08678	0.001434			
7	3	75.0	0.08678				
8	3	87.5	0.08678				
9	3	100.0	0.08678				
10	3	125.0	0.08678				
11	3	150.0	0.08678	0.001017			
12	4	175.0	0.1122				
13	4	200.0	0.1122				
14	4	225.0	0.1122				
..	..	...	...				
Node 15 - 59, ISPR(I): 4, P(2I-1): 0.1122							
..	..	...	...				
59	4	1350.0	0.1122				

TABLE XXIII

MODIFIED INPUT FILE OF SOIL AND PESTICIDE PARAMETERS FOR FEM

Card No.	Input Data	Description of Parameters		
1 - 3		Title		
	*** MODIFIED INPUT FILE FOR MODIFIED SUMATRA-1 *** *** SOIL PARAMETERS AND SOLUTE PROPERTIES *** *** SOIL TYPE : 4, SOLUTE : PESTICIDE ***			
4	4	NMAT: Number of different soil types.		
5		WCR(I) for I= 1 to NMAT : Residue moisture content for each soil type.		
	0.0634	0.0454	0.0624	0.0779
6		WCS(I) for I= 1 to NMAT : Saturated moisture content for each soil type.		
	0.438	0.42	0.45	0.40
7		ALPHA(I) for I= 1 to NMAT : Values of the coefficient " a " of each soil type.		
	0.0112	0.012	0.0108	0.009
8		RN(I) for I= 1 to NMAT : Values of the exponent of " n " of each soil type.		
	2.6	3.0	2.4	3.0
9		CONDS(I) for I= 1 to NMAT : Values of the saturated hydraulic conductivity for each soil type.		
	270	400	205	10
10		SS(I) for I= 1 to NMAT : Values of specific storage coefficient for each soil type.		
	1.0E-7	1.0E-7	1.0E-7	1.0E-7
11		RHO(I) for I= 1 to NMAT : Values of bulk density for each soil type.		
	1.488	1.554	1.578	1.60

TABLE XXII (Continue)

Card No.	Input Data	Description of Parameters			
12		DIF(I) for I= 1 to NMAT : Values of molecular diffusion coefficient (Doτ) for each soil type.			
	0.67	0.67	0.67	0.67	
13		DSP(I) for I= 1 to NMAT : Values of dispersivity for each soil type.			
	0.0	0.0	0.0	0.0	
14		ADC(I) for I= 1 to NMAT : Values of distribution coefficient for each soil type. Referred to Table IV.			
	Dicamba :	0.017	0.00316	0.00223	0.00372
	2,4-D :	3.66	0.677	0.478	0.796
	Atrazine :	1.60	0.29	0.21	0.348
15		DL0(I) for I= 1 to NMAT : Values of zero-order liquid phase rate coefficient for each soil type.			
	0.0	0.0	0.0	0.0	
16		DL1(I) for I= 1 to NMAT : Values of first-order liquid phase rate coefficient for each soil type. Referred to Table III.			
	Dicamba :	-0.0197	-0.0197	-0.0197	-0.0197
	2,4-D :	-0.1036	-0.1036	-0.1036	-0.1036
	Atrazine :	-0.0131	-0.0131	-0.0131	-0.0131
17		DS1(I) for I= 1 to NMAT : Values of first-order solid phase rate coefficient for each soil type.			
	same as DL(I)				

APPENDIX B

COMPARISONS OF SIMULATION MECHANISMS BETWEEN PRZM AND GLEAMS, PRZM AND FEM

TABLE XXIV

COMPARISONS OF SOLUTE TRANSPORT MECHANISMS BETWEEN PRZM AND GLEAMS

COMPONENT	PRZM	GLEAMS
Water Balance In The Surface	precipitation, runoff, snowmelt, infiltration plant and soil evaporation	precipitation, runoff, snowmelt, infiltration, plant and soil evaporation
Runoff	used a modification of SCS curve number method, snow melt was considered $\text{Runoff } Q = \frac{(P+SM-0.2S)^2}{P+SM+0.8S}$ $S = 1000/RCN - 10$ Q: runoff P: precipitation SM: snowmelt S: watershed retention parameter RCN: runoff curve number	used SCS curve number method soil water storage was considered. $Q = \frac{(P-0.2S)^2}{P+0.8S}$ $S = S_{max}\ (UL-SW)/UL$ $S_{max} = 1000/CN1 - 10$ UL: upper limit of soil water storage SW: soil water content CN1: curve number
Erosion	Modified Universal Soil Loss Equation: used average storm duration time to simulate peak runoff rate. used enrichment ratio with organic matter content to simulate pesticide delivered in erosion	Universal Soil Loss Equation : based on storm events considered soil particle detachment and sediment transport for pesticide delivered in erosion
Soil Evaporation	$(ET)i = \text{Min}\ \{(SWi-WPi)fd\ ,\ (ETp - \Sigma\ ETi)\}$ $ETp = ETp, \quad SW > 0.6\ Fc$ $= SMFAC * ETp\ , \quad WP < SW < 0.6Fc$ $= 0, \quad SW < WP$ $ETp = Cp * PE$ where ETi: actual evapotranspiration from layer i	$Eso = Eo\ \exp[\ -0.4\ Lai\ ]$ $Eo = \frac{1.28\ \delta\ Ho}{\delta + \mu}$ $\delta = \frac{5304\ \exp(21.225 - 5304/T)}{T^2}$ $Ho = (\ 1 - \epsilon\ )*R/58.3$

TABLE XXIV (CONTINUED)

COMPONENT	PRZM	GLEAMS
	fd : depth factor Fc : field capacity WP : wilting point ETp: potential evapotranspiration SMFAC: soil moisture factor PE: pan evaporation Cp: pan factor SW: soil water content	Eo : potential evaporation δ : slope of saturation vapor pressure curve Ho: net solar radiation Lai: leaf area index R : daily solar radiation μ : psychrometric constant ϵ : albedo for solar radiation
Adsorption where	linear adsorption $Cs = Kd * Cw$ Cs: sorbed concentration Cw: dissolved concentration Kd: sorption partition coefficient	linear adsorption $Cs = Kd * Cw$
Decay	used first order decay rate Ks in both soil and solution $Decay = Ks\ \theta\ Cw$	used pesticide soil half life $S_{1/2}$ $Cw = Co\ exp(-0.693\ t / S_{1/2})$ Co: original concentration
Water Movement In The Root Zone where	compartmental mass balance based on field capacity and wilting point $SWi = SWi + Ii\text{-}1 - Ui - Ii$ SWi : soil water content in the i-th compartment I : infiltration water U : transpiration	compartmental mass balance based on field capacity $PERi = SWi + PERi\text{-}1 - Fci$ PERi : percolation water from the i-th compartment Fc : field capacity
Below The Root Zone	$SWi = SWi + Ii\text{-}1 - Ii$	Not Considered

TABLE XXIV (CONTINUED)

COMPONENT	PRZM	GLEAMS
Solute Transport	use partial differential equation to simulate pesticide transport in advection and dispersion	use compartmental mass balance to calculate pesticide delivered with infiltration water
Solution	finite difference numerical solution with backward-difference implicit scheme to solve the equation	compartmental mass balance pesticide flux = concentration * water flux

TABLE XXV

COMPARISONS OF SOLUTE TRANSPORT MECHANISMS BETWEEN PRZM AND FEM

Component	PRZM	FEM
Solute Transport Equation	$\frac{\partial [\, Cw \cdot \theta + Cs \cdot Kd \cdot \sigma \,]}{\partial t} = \frac{\partial D}{\partial x} \frac{\partial (Cw \cdot \theta)}{\partial x} - \frac{\partial (v \cdot Cw \cdot \theta)}{\partial x} - \Sigma\, Kw \cdot Cw \cdot \theta - \Sigma\, Ks \cdot Cs \cdot \sigma$	$\frac{\partial [\, C \cdot \theta + Cs \cdot \sigma \,]}{\partial t} = \frac{\partial}{\partial x} [\, \theta \cdot D \frac{\partial C}{\partial x} - q \cdot C \,] + \alpha \cdot \theta \cdot C + \beta \cdot \sigma \cdot Cs + \tau \cdot \theta$
where	Cw: dissolved concentration Cs: sorbed concentration θ : soil water content Kd: partition coefficient D : coefficient of dispersion and diffusion v : water pore velocity σ : soil bulk density Kw: summation of all first-order decay rate for dissolved pesticide Ks: summation of all first-order decay rate for sorbed pesticide	C : solution concentration Cs: adsorbed concentration θ : soil water content σ : soil bulk density D : dispersion coefficient q : water volumetric flux α : first-order rate constant for liquid phase β : first-order rate constant for solid phase τ : zero-order rate constant for liquid phase
Pore Water Velocity	calculated on the basis of an user-specified drainage condition	calculated according to Darcy's equation
Solution	finite difference numerical solution with backward difference implicit scheme	Hermitian finite element solution

APPENDIX C

PRZM OUTPUT OF PESTICIDE FLUX

PRZM Output Of Annual Pesticide Flux For Dicamba Under High Rainfall Year And CN: A

```
1****************************
* ANNUAL PESTICIDE OUTPUT  *   PRZM OUTPUT: DICAMBA
*                          *                HIGH RAINFALL
* DATE:     31 DEC., 57    *                CN: A
****************************
                               STORAGE UNITS IN KG/HA
                               FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.3877	.0000	.6123	.3926E-16
4	21	.0000	.0000	.1471	.1014E-01	.0000	.1369	.1036E-06
4	41	.0000	.0000	.2624E-01	.2712E-02	.0000	.2348E-01	.4655E-04
4	61	.0000	.0000	.1628E-02	.2258E-03	.0000	.1374E-02	.2860E-04
4	81	.0000	.0000	.3187E-04	.5229E-05	.0000	.2548E-04	.1166E-05
4	101	.0000	.0000	.2479E-06	.4478E-07	.0000	.1910E-06	.1209E-07
4	121	.0000	.0000	.1081E-08	.2054E-09	.0000	.8156E-09	.6020E-10
4	141	.0000	.0000	.3346E-11	.6564E-12	.0000	.2487E-11	.2025E-12

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9985
TOTAL EROSION OF PESTICIDE	.3281E-09
TOTAL RUNOFF OF PESTICIDE	.2227E-04
PESTICIDE LEACHED BELOW ROOT ZONE	.6123
TOTAL PESTICIDE IN CORE	.1509E-02

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.1167E-10
CUMULATIVE ERROR	-.1906E-07

PRZM Output Of Annual Pesticide Flux For Dicamba Under High Rainfall Year And CN: B

```
1****************************  PRZM OUTPUT: DICAMBA
* ANNUAL PESTICIDE OUTPUT  *                HIGH RAINFALL
*                          *                CN: B
* DATE:     31 DEC., 57    *
****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.3877	.0000	.6123	.3926E-16
4	21	.0000	.0000	.1482	.1007E-01	.0000	.1381	.8840E-07
4	41	.0000	.0000	.2758E-01	.2769E-02	.0000	.2477E-01	.4393E-04
4	61	.0000	.0000	.1874E-02	.2531E-03	.0000	.1591E-02	.3059E-04
4	81	.0000	.0000	.4207E-04	.6722E-05	.0000	.3389E-04	.1450E-05
4	101	.0000	.0000	.3891E-06	.6848E-07	.0000	.3027E-06	.1794E-07
4	121	.0000	.0000	.2075E-08	.3839E-09	.0000	.1582E-08	.1091E-09
4	141	.0000	.0000	.8027E-11	.1532E-11	.0000	.6037E-11	.4580E-12

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9985
TOTAL EROSION OF PESTICIDE	.6576E-10
TOTAL RUNOFF OF PESTICIDE	.6163E-05
PESTICIDE LEACHED BELOW ROOT ZONE	.6123
TOTAL PESTICIDE IN CORE	.1509E-02

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.2259E-10
CUMULATIVE ERROR	-.2966E-07

PRZM Output Of Annual Pesticide Flux For Dicamba Under High Rainfall Year And CN: C

```
1****************************
* ANNUAL PESTICIDE OUTPUT  *   PRZM OUTPUT : DICAMBA
*                          *                 HIGH RAINFALL
* DATE:     31 DEC., 57    *                 CN: C
****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.3877	.0000	.6123	.3926E-16
4	21	.0000	.0000	.1486	.1002E-01	.0000	.1386	.7174E-07
4	41	.0000	.0000	.2903E-01	.2796E-02	.0000	.2619E-01	.4047E-04
4	61	.0000	.0000	.2244E-02	.2905E-03	.0000	.1920E-02	.3318E-04
4	81	.0000	.0000	.6158E-04	.9430E-05	.0000	.5021E-04	.1940E-05
4	101	.0000	.0000	.7458E-06	.1255E-06	.0000	.5891E-06	.3128E-07
4	121	.0000	.0000	.5551E-08	.9778E-09	.0000	.4310E-08	.2631E-09
4	141	.0000	.0000	.3151E-10	.5715E-11	.0000	.2419E-10	.1614E-11

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9985
TOTAL EROSION OF PESTICIDE	.4809E-10
TOTAL RUNOFF OF PESTICIDE	.4081E-05
PESTICIDE LEACHED BELOW ROOT ZONE	.6123
TOTAL PESTICIDE IN CORE	.1509E-02

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.3487E-11
CUMULATIVE ERROR	-.4367E-07

PRZM Output Of Annual Pesticide Flux For Dicamba Under Average Rainfall Year And CN: A

```
*****************************
* ANNUAL PESTICIDE OUTPUT  *   PRZM OUTPUT : DICAMBA
*                          *                 AVERAGE RAINFALL
* DATE:    31 DEC., 69     *                 CN: A
*****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.3862	.0000	.6138	.1201E-10
4	21	.0000	.0000	.6103E-01	.8107E-02	.0000	.5289E-01	.3650E-04
4	41	.0000	.0000	.1304E-02	.2534E-03	.0000	.1023E-02	.2711E-04
4	61	.0000	.0000	.4602E-05	.1066E-05	.0000	.3340E-05	.1949E-06
4	81	.0000	.0000	.4862E-08	.1217E-08	.0000	.3390E-08	.2553E-09
4	101	.0000	.0000	.3117E-11	.7960E-12	.0000	.2149E-11	.1726E-12
4	121	.0000	.0000	.1586E-16	.5246E-17	.0000	.4204E-17	.6413E-17
4	141	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9983
TOTAL EROSION OF PESTICIDE	.2503E-08
TOTAL RUNOFF OF PESTICIDE	.2362E-03
PESTICIDE LEACHED BELOW ROOT ZONE	.6138
TOTAL PESTICIDE IN CORE	.1507E-02

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.5231E-11
CUMULATIVE ERROR	-.2831E-07

PRZM Output Of Annual Pesticide Flux For Dicamba Under Average Rainfall Year And CN: B

```
****************************
* ANNUAL PESTICIDE OUTPUT  *          PRZM OUTPUT : DICAMBA
*                          *                        AVERAGE RAINFALL
* DATE:     31 DEC., 69    *                        CN: B
****************************
                            STORAGE UNITS IN KG/HA
                            FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.3861	.0000	.6139	.1201E-10
4	21	.0000	.0000	.6203E-01	.8146E-02	.0000	.5385E-01	.3501E-04
4	41	.0000	.0000	.1408E-02	.2693E-03	.0000	.1111E-02	.2842E-04
4	61	.0000	.0000	.5615E-05	.1277E-05	.0000	.4106E-05	.2315E-06
4	81	.0000	.0000	.7040E-08	.1726E-08	.0000	.4956E-08	.3578E-09
4	101	.0000	.0000	.5571E-11	.1391E-11	.0000	.3883E-11	.2970E-12
4	121	.0000	.0000	.7642E-16	.2704E-16	.0000	.2312E-16	.2626E-16
4	141	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9984
TOTAL EROSION OF PESTICIDE	.1362E-08
TOTAL RUNOFF OF PESTICIDE	.1018E-03
PESTICIDE LEACHED BELOW ROOT ZONE	.6139
TOTAL PESTICIDE IN CORE	.1508E-02

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.1509E-10
CUMULATIVE ERROR	-.5208E-07

PRZM Output Of Annual Pesticide Flux For Dicamba Under Average Rainfall Year And CN: C

```
******************************
* ANNUAL PESTICIDE OUTPUT   *          PRZM OUTPUT : DICAMBA
*                           *                        AVERAGE RAINFALL
* DATE:     31 DEC., 69     *                        CN: C
******************************
                            STORAGE UNITS IN KG/HA
                            FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
CURRENT CONDITIONS
------------------

CROP NUMBER                            1


FLUXES AND STORAGES FOR THIS PERIOD
-----------------------------------
```

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.3861	.0000	.6139	.1201E-10
4	21	.0000	.0000	.6249E-01	.8141E-02	.0000	.5431E-01	.3326E-04
4	41	.0000	.0000	.1525E-02	.2845E-03	.0000	.1210E-02	.3001E-04
4	61	.0000	.0000	.7238E-05	.1597E-05	.0000	.5353E-05	.2879E-06
4	81	.0000	.0000	.1203E-07	.2838E-08	.0000	.8613E-08	.5771E-09
4	101	.0000	.0000	.1384E-10	.3310E-11	.0000	.9843E-11	.6885E-12
4	121	.0000	.0000	.6499E-15	.2741E-15	.0000	.2091E-15	.1666E-15
4	141	.0000	.0000	.0000	.0000	.0000	.0000	.0000

```
* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.


SUMMARY FLUXES AND STORAGES FOR SOIL
------------------------------------

TOTAL PLANT UPTAKE OF PESTICIDE       .0000
TOTAL DECAY OF PESTICIDE              .9984
TOTAL EROSION OF PESTICIDE            .8521E-09
TOTAL RUNOFF OF PESTICIDE             .5373E-04
PESTICIDE LEACHED BELOW ROOT ZONE     .6139
TOTAL PESTICIDE IN CORE               .1509E-02


MATERIAL BALANCE
----------------

PESTICIDE BALANCE ERROR               -.1011E-11
CUMULATIVE ERROR                      -.5924E-07
```

PRZM Output Of Annual Pesticide Flux For Dicamba Under Low Rainfall Year And CN: A

```
******************************
* ANNUAL PESTICIDE OUTPUT  *          PRZM OUTPUT : DICAMBA
*                          *                        LOW RAINFALL
* DATE:     31 DEC., 54    *                        CN: A
******************************
                             STORAGE UNITS IN KG/HA
                             FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.7787	.0000	.2213	.1572E-05
3	9	.0000	.0000	.8977E-01	.1243E-01	.0000	.7725E-01	.9183E-04
4	17	.0000	.0000	.1843E-01	.4708E-02	.0000	.1363E-01	.9372E-04
4	25	.0000	.0000	.1252E-02	.3848E-03	.0000	.8562E-03	.1071E-04
4	33	.0000	.0000	.3389E-04	.1432E-04	.0000	.2441E-04	.5563E-06
4	41	.0000	.0000	.5590E-06	.2723E-06	.0000	.2742E-06	.1247E-07
4	49	.0000	.0000	.2643E-09	.1750E-09	.0000	.5005E-10	.3333E-10
4	57	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9971
TOTAL EROSION OF PESTICIDE	.1536E-07
TOTAL RUNOFF OF PESTICIDE	.1360E-02
PESTICIDE LEACHED BELOW ROOT ZONE	.2213
TOTAL PESTICIDE IN CORE	.1436E-02

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.8746E-11
CUMULATIVE ERROR	.8220E-07

PRZM Output Of Annual Pesticide Flux For Dicamba Under In Low Rainfall Year And CN: B

```
*****************************
* ANNUAL PESTICIDE OUTPUT   *        PRZM OUTPUT : DICAMBA
*                           *                      LOW RAINFALL
* DATE:     31 DEC., 54     *                      CN: B
*****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

		FOLIAR APPLICATION	PREVIOUS STORAGE		DECAY		WASHOFF	CURRENT STORAGE
CANOPY		.0000	.0000		.0000		.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.7779	.0000	.2221	.1572E-05
3	9	.0000	.0000	.9121E-01	.1238E-01	.0000	.7874E-01	.9018E-04
4	17	.0000	.0000	.1343E-01	.4864E-02	.0000	.1447E-01	.9538E-04
4	25	.0000	.0000	.1409E-02	.4239E-03	.0000	.9740E-03	.1157E-04
4	33	.0000	.0000	.4303E-04	.1807E-04	.0000	.3031E-04	.6541E-06
4	41	.0000	.0000	.7783E-06	.3610E-06	.0000	.4015E-06	.1587E-07
4	49	.0000	.0000	.5240E-09	.3165E-09	.0000	.1364E-09	.7113E-10
4	57	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9980
TOTAL EROSION OF PESTICIDE	.7728E-08
TOTAL RUNOFF OF PESTICIDE	.5299E-03
PESTICIDE LEACHED BELOW ROOT ZONE	.2221
TOTAL PESTICIDE IN CORE	.1503E-02

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.4024E-11
CUMULATIVE ERROR	.9418E-07

PRZM Output Of Annual Pesticide Flux For Dicamba Under Low Rainfall Year And CN: C

```
1****************************
* ANNUAL PESTICIDE OUTPUT  *          PRZM OUTPUT : DICAMBA
*                          *                        LOW RAINFALL
* DATE:     31 DEC., 54    *                        CN: C
****************************
                            STORAGE UNITS IN KG/HA
                            FLUX UNITS IN KG/HA/OUTPUT TIMESTEP

CURRENT CONDITIONS
------------------

CROP NUMBER                             1

FLUXES AND STORAGES FOR THIS PERIOD
-----------------------------------
```

		FOLIAR APPLICATION	PREVIOUS STORAGE		DECAY		WASHOFF	CURRENT STORAGE
CANOPY		.0000	.0000		.0000		.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.7776	.0000	.2224	.1572E-05
3	9	.0000	.0000	.9185E-01	.1233E-01	.0000	.7944E-01	.8896E-04
4	17	.0000	.0000	.1998E-01	.4943E-02	.0000	.1495E-01	.9633E-04
4	25	.0000	.0000	.1505E-02	.4471E-03	.0000	.1046E-02	.1211E-04
4	33	.0000	.0000	.5549E-04	.2015E-04	.0000	.3462E-04	.7179E-06
4	41	.0000	.0000	.9746E-06	.4384E-06	.0000	.5176E-06	.1867E-07
4	49	.0000	.0000	.7676E-09	.4393E-09	.0000	.2236E-09	.9869E-10
4	57	.0000	.0000	.0000	.0000	.0000	.0000	.0000

```
* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL
------------------------------------

TOTAL PLANT UPTAKE OF PESTICIDE          .0000
TOTAL DECAY OF PESTICIDE                 .9382
TOTAL EROSION OF PESTICIDE               .4330E-08
TOTAL RUNOFF OF PESTICIDE                .2504E-03
PESTICIDE LEACHED BELOW ROOT ZONE        .2224
TOTAL PESTICIDE IN CORE                  .1506E-02

MATERIAL BALANCE
----------------

PESTICIDE BALANCE ERROR                  .2971E-10
CUMULATIVE ERROR                         .8119E-07
```

PRZM Output Of Annual Pesticide Flux For 2,4-D Under High Rainfall Year And CN: A

```
*****************************
* ANNUAL PESTICIDE OUTPUT  *   PRZM OUTPUT :  2,4-D
*                          *                  HIGH RAINFALL
* DATE:    31 DEC., 57     *                  CN: A
*****************************
                               STORAGE UNITS IN KG/HA
                               FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.9934	.0000	.6625E-02	.1623E-14
2	6	.0000	.0000	.3407E-05	.2489E-05	.0000	.9180E-06	.2594E-15
3	11	.0000	.0000	.1193E-07	.7756E-08	.0000	.4176E-08	.3395E-16
4	16	.0000	.0000	.5435E-10	.4095E-10	.0000	.1340E-10	.2187E-17
4	21	.0000	.0000	.4807E-13	.3645E-13	.0000	.1161E-13	.1110E-19
4	26	.0000	.0000	.3685E-16	.2826E-16	.0000	.8593E-17	.2594E-22
4	31	.0000	.0000	.2392E-19	.1849E-19	.0000	.5424E-20	.0000
4	36	.0000	.0000	.1298E-22	.7996E-23	.0000	.2779E-23	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	1.000
TOTAL EROSION OF PESTICIDE	.5131E-08
TOTAL RUNOFF OF PESTICIDE	.2058E-05
PESTICIDE LEACHED BELOW ROOT ZONE	.6625E-02
TOTAL PESTICIDE IN CORE	.5275E-14

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.3181E-22
CUMULATIVE ERROR	.8335E-07

PRZM Output Of Annual Pesticide Flux For 2,4-D Under High Rainfall Year And CN: B

```
1****************************
* ANNUAL PESTICIDE OUTPUT *   PRZM OUTPUT: 2,4-D
*                         *                HIGH RAINFALL
* DATE:     31 DEC., 57   *                CN: B
****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.9934	.0000	.6626E-02	.1623E-14
2	6	.0000	.0000	.3469E-05	.2524E-05	.0000	.9441E-06	.2651E-15
3	11	.0000	.0000	.1285E-07	.8297E-08	.0000	.4556E-08	.3623E-16
4	16	.0000	.0000	.6294E-10	.4712E-10	.0000	.1582E-10	.2487E-17
4	21	.0000	.0000	.6192E-13	.4660E-13	.0000	.1532E-13	.1377E-19
4	26	.0000	.0000	.5394E-16	.4101E-16	.0000	.1294E-16	.3549E-22
4	31	.0000	.0000	.4054E-19	.3105E-19	.0000	.9485E-20	.0000
4	36	.0000	.0000	.2611E-22	.1756E-22	.0000	.5806E-23	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	1.000
TOTAL EROSION OF PESTICIDE	.2071E-08
TOTAL RUNOFF OF PESTICIDE	.8797E-06
PESTICIDE LEACHED BELOW ROOT ZONE	.6626E-02
TOTAL PESTICIDE IN CORE	.5320E-14

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.1144E-21
CUMULATIVE ERROR	.8352E-07

PRZM Output Of Annual Pesticide Flux For 2,4-D Under High Rainfall Year And CN: C

```
******************************
* ANNUAL PESTICIDE OUTPUT  *   PRZM OUTPUT : 2,4-D
*                          *                 HIGH RAINFALL
* DATE:     31 DEC., 57    *                 CN: C
******************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.9934	.0000	.6626E-02	.1623E-14
2	6	.0000	.0000	.3491E-05	.2537E-05	.0000	.9545E-06	.2723E-15
3	11	.0000	.0000	.1336E-07	.8570E-08	.0000	.4786E-08	.3952E-16
4	16	.0000	.0000	.7104E-10	.5264E-10	.0000	.1839E-10	.2969E-17
4	21	.0000	.0000	.8351E-13	.6194E-13	.0000	.2157E-13	.1869E-19
4	26	.0000	.0000	.9176E-16	.6860E-16	.0000	.2317E-16	.5621E-22
4	31	.0000	.0000	.9070E-19	.6818E-19	.0000	.2252E-19	.0000
4	36	.0000	.0000	.8227E-22	.5924E-22	.0000	.1992E-22	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	1.000
TOTAL EROSION OF PESTICIDE	.1472E-08
TOTAL RUNOFF OF PESTICIDE	.5743E-06
PESTICIDE LEACHED BELOW ROOT ZONE	.6626E-02
TOTAL PESTICIDE IN CORE	.5374E-14

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.2664E-22
CUMULATIVE ERROR	.8356E-07

PRZM Output Of Annual Pesticide Flux For 2,4-D Under Average Rainfall Year And CN: A

```
1****************************
* ANNUAL PESTICIDE OUTPUT  *   PRZM OUTPUT: 2,4-D
*                          *                AVERAGE RAINFALL
* DATE:     31 DEC., 69    *                CN: A
****************************
                               STORAGE UNITS IN KG/HA
                               FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.9927	.0000	.7268E-02	.2803E-14
2	6	.0000	.0000	.3700E-06	.2990E-06	.0000	.7108E-07	.8412E-16
3	11	.0000	.0000	.3492E-09	.2529E-09	.0000	.9633E-10	.2030E-17
4	16	.0000	.0000	.4252E-12	.3503E-12	.0000	.7491E-13	.2049E-19
4	21	.0000	.0000	.6396E-16	.5330E-16	.0000	.1067E-16	.1514E-22
4	26	.0000	.0000	.7662E-20	.6425E-20	.0000	.1235E-20	.0000
4	31	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4	36	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	1.000
TOTAL EROSION OF PESTICIDE	.1370E-08
TOTAL RUNOFF OF PESTICIDE	.5867E-06
PESTICIDE LEACHED BELOW ROOT ZONE	.7268E-02
TOTAL PESTICIDE IN CORE	.5452E-14

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.7539E-22
CUMULATIVE ERROR	.1410E-06

PRZM Output Of Annual Pesticide Flux For 2,4-D Under Average Rainfall Year And CN: B

```
1***************************  PRZM OUTPUT : 2,4D
* ANNUAL PESTICIDE OUTPUT *               AVERAGE RAINFALL
*                         *               CN: B
* DATE:     31 DEC., 69   *
***************************
                           STORAGE UNITS IN KG/HA
                           FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.9927	.0000	.7268E-02	.2803E-14
1	2	.0000	.0000	.7268E-02	.7099E-02	.0000	.1694E-03	.1773E-14
2	3	.0000	.0000	.1694E-03	.1520E-03	.0000	.1734E-04	.3376E-15
2	5	.0000	.0000	.2276E-05	.1900E-05	.0000	.3766E-06	.1529E-15
3	10	.0000	.0000	.1346E-08	.9681E-09	.0000	.3778E-09	.4745E-17
3	15	.0000	.0000	.2134E-11	.1648E-11	.0000	.4857E-12	.6520E-19
4	20	.0000	.0000	.4569E-15	.3790E-15	.0000	.7792E-16	.8061E-22
4	30	.0000	.0000	.5590E-23	.0000	.0000	.0000	.0000
4	35	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4	40	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	1.000
TOTAL EROSION OF PESTICIDE	.7216E-09
TOTAL RUNOFF OF PESTICIDE	.2442E-06
PESTICIDE LEACHED BELOW ROOT ZONE	.7268E-02
TOTAL PESTICIDE IN CORE	.5474E-14

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.7594E-22
CUMULATIVE ERROR	.1409E-06

PRZM Output Of Annual Pesticide Flux For 2,4-D Under Average Rainfall Year And CN: C

```
1****************************          PRZM OUTPUT: 2,4-D
* ANNUAL PESTICIDE OUTPUT  *                        AVERAGE RAINFALL
*                          *                        CN: C
* DATE:     31 DEC., 69    *
****************************
```

STORAGE UNITS IN KG/HA
FLUX UNITS IN KG/HA/OUTPUT TIMESTEP

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE		DECAY		WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000		.0000		.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.9327	.0000	.7269E-02	.2803E-14
2	6	.0000	.0000	.3789E-06	.3049E-06	.0000	.7402E-07	.8889E-16
3	11	.0000	.0000	.3884E-09	.2736E-09	.0000	.1088E-09	.2343E-17
4	16	.0000	.0000	.5106E-12	.4190E-12	.0000	.9155E-13	.2679E-19
4	21	.0000	.0000	.8435E-16	.6999E-16	.0000	.1436E-16	.2359E-22
4	26	.0000	.0000	.1129E-19	.9421E-20	.0000	.1865E-20	.0000
4	31	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4	36	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	1.000
TOTAL EROSION OF PESTICIDE	.4356E-09
TOTAL RUNOFF OF PESTICIDE	.1254E-06
PESTICIDE LEACHED BELOW ROOT ZONE	.7269E-02
TOTAL PESTICIDE IN CORE	.5498E-14

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.1684E-22
CUMULATIVE ERROR	.1409E-06

PRZM Output Of Annual Pesticide Flux For 2,4-D Under Low Rainfall Year And CN: A

```
******************************
* ANNUAL PESTICIDE OUTPUT    *          PRZM OUTPUT: 2,4-D
*                            *                       LOW RAINFALL
* DATE:     31 DEC., 54      *                       CN: A
******************************
                         STORAGE UNITS IN KG/HA
                         FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	1.000	.0000	.4541E-04	.4290E-14
2	6	.0000	.0000	.1076E-07	.8604E-08	.0000	.2151E-08	.4420E-17
3	11	.0000	.0000	.7675E-11	.5752E-11	.0000	.1923E-11	.7950E-20
4	16	.0000	.0000	.6010E-14	.5015E-14	.0000	.9948E-15	.1023E-22
4	21	.0000	.0000	.7589E-18	.6330E-18	.0000	.1259E-18	.0000
4	26	.0000	.0000	.7467E-22	.6282E-22	.0000	.1004E-22	.0000
4	31	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4	36	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	1.000
TOTAL EROSION OF PESTICIDE	.6496E-09
TOTAL RUNOFF OF PESTICIDE	.2640E-06
PESTICIDE LEACHED BELOW ROOT ZONE	.4541E-04
TOTAL PESTICIDE IN CORE	.5508E-14

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.1219E-21
CUMULATIVE ERROR	.9278E-07

PRZM Output Of Annual Pesticide Flux For 2,4-D Under Low Rainfall Year And CN: B

```
1****************************
* ANNUAL PESTICIDE OUTPUT   *         PRZM OUTPUT : 2,4-D
*                           *                       LOW RAINFALL
* DATE:     31 DEC., 54     *                       CN : B
*****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	1.000	.0000	.4557E-04	.4290E-14
2	6	.0000	.0000	.1150E-07	.9151E-08	.0000	.2345E-08	.4665E-17
3	11	.0000	.0000	.9063E-11	.6744E-11	.0000	.2319E-11	.9062E-20
4	16	.0000	.0000	.7964E-14	.6610E-14	.0000	.1354E-14	.1288E-22
4	21	.0000	.0000	.1150E-17	.9542E-18	.0000	.1962E-18	.0000
4	26	.0000	.0000	.1333E-21	.1127E-21	.0000	.1858E-22	.0000
4	31	.0000	.0000	.0000	.0000	.0000	.0000	.0000
4	36	.0000	.0000	.0000	.0000	.0000	.0000	.0000

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	1.000
TOTAL EROSION OF PESTICIDE	.3224E-09
TOTAL RUNOFF OF PESTICIDE	.1003E-06
PESTICIDE LEACHED BELOW ROOT ZONE	.4557E-04
TOTAL PESTICIDE IN CORE	.5523E-14

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.2436E-21
CUMULATIVE ERROR	.9277E-07

PRZM Output Of Annual Pesticide Flux For 2,4-D Under Low Rainfall Year And CN: C

```
*****************************
* ANNUAL PESTICIDE OUTPUT  *          PRZM OUTPUT: 2,4-D
*                          *                       LOW RAINFALL
* DATE:     31 DEC., 54    *                       CN: C
*****************************
                            STORAGE UNITS IN KG/HA
                            FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
CURRENT CONDITIONS
------------------
CROP NUMBER                             1

FLUXES AND STORAGES FOR THIS PERIOD
-----------------------------------
```

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	1.000	.0000	.4563E-04	.4290E-14
1	2	.0000	.0000	.4563E-04	.4374E-04	.0000	.1891E-05	.1054E-14
2	3	.0000	.0000	.1891E-05	.1572E-05	.0000	.3190E-06	.1181E-15
2	4	.0000	.0000	.3190E-06	.2597E-06	.0000	.5925E-07	.4644E-16
2	6	.0000	.0000	.1179E-07	.9367E-08	.0000	.2426E-08	.4818E-17
3	8	.0000	.0000	.5610E-09	.4158E-09	.0000	.1452E-09	.3646E-18
3	10	.0000	.0000	.3758E-10	.2785E-10	.0000	.9721E-11	.3365E-19
3	12	.0000	.0000	.2512E-11	.1869E-11	.0000	.6431E-12	.2768E-20
3	14	.0000	.0000	.1636E-12	.1221E-12	.0000	.4154E-13	.2110E-21
4	16	.0000	.0000	.9006E-14	.7456E-14	.0000	.1550E-14	.1457E-22
4	18	.0000	.0000	.2674E-15	.2212E-15	.0000	.4622E-16	.0000
4	20	.0000	.0000	.7988E-17	.6608E-17	.0000	.1379E-17	.0000
4	22	.0000	.0000	.2379E-18	.1969E-18	.0000	.4101E-19	.0000
4	24	.0000	.0000	.6956E-20	.5829E-20	.0000	.1126E-20	.0000
4	26	.0000	.0000	.1712E-21	.1449E-21	.0000	.2434E-22	.0000
4	28	.0000	.0000	.2667E-23	.0000	.0000	.0000	.0000
4	30	.0000	.0000	.0000	.0000	.0000	-.0000	.0000

```
* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL
------------------------------------

TOTAL PLANT UPTAKE OF PESTICIDE        .0000
TOTAL DECAY OF PESTICIDE               1.000
TOTAL EROSION OF PESTICIDE             .1770E-09
TOTAL RUNOFF OF PESTICIDE              .4574E-07
PESTICIDE LEACHED BELOW ROOT ZONE      .4563E-04
TOTAL PESTICIDE IN CORE                .5532E-14

MATERIAL BALANCE
----------------
PESTICIDE BALANCE ERROR               -.1884E-21
CUMULATIVE ERROR                       .9277E-07
```

PRZM Output Of Annual Pesticide Flux For Atrazine Under High Rainfall Year And CN: A

```
*****************************
* ANNUAL PESTICIDE OUTPUT  *        PRZM OUTPUT : ATRAZINE
*                          *                      HIGH RAINFALL
* DATE:     31 DEC., 57    *                      CN: A
*****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.6509	.0000	.3483	.7275E-03
3	9	.0000	.0000	.5337E-01	.9572E-02	.0000	.4310E-01	.6973E-03
4	17	.0000	.0000	.5461E-02	.1703E-02	.0000	.3360E-02	.3984E-03
4	25	.0000	.0000	.5870E-04	.1998E-04	.0000	.3034E-04	.8380E-05
4	33	.0000	.0000	.1907E-06	.6778E-07	.0000	.8754E-07	.3543E-07
4	41	.0000	.0000	.2810E-09	.1023E-09	.0000	.1195E-09	.5921E-10
4	49	.0000	.0000	.2515E-12	.9276E-13	.0000	.1020E-12	.5666E-13
4	57	.0000	.0000	.1661E-15	.6171E-16	.0000	.6554E-16	.3883E-16

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9800
TOTAL EROSION OF PESTICIDE	.7111E-05
TOTAL RUNOFF OF PESTICIDE	.7411E-02
PESTICIDE LEACHED BELOW ROOT ZONE	.3483
TOTAL PESTICIDE IN CORE	.1256E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.5891E-10
CUMULATIVE ERROR	.1011E-06

PRZM Output Of Annual Pesticide Flux For Atrazine Under High Rainfall Year And CN: B

```
!****************************
* ANNUAL PESTICIDE OUTPUT  *         PRZM OUTPUT : ATRAZINE
*                          *                       HIGH RAINFALL
* DATE:     31 DEC., 57    *                       CN: B
****************************
                           STORAGE UNITS IN KG/HA
                           FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.6489	.0000	.3504	.7275E-03
3	9	.0000	.0000	.5517E-01	.9716E-02	.0000	.4476E-01	.6961E-03
4	17	.0000	.0000	.5944E-02	.1827E-02	.0000	.3636E-02	.4201E-03
4	25	.0000	.0000	.7052E-04	.2375E-04	.0000	.3697E-04	.9800E-05
4	33	.0000	.0000	.2595E-06	.9137E-07	.0000	.1211E-06	.4696E-07
4	41	.0000	.0000	.4430E-09	.1599E-09	.0000	.1922E-09	.9087E-10
4	49	.0000	.0000	.4696E-12	.1718E-12	.0000	.1950E-12	.1029E-12
4	57	.0000	.0000	.3752E-15	.1383E-15	.0000	.1518E-15	.8510E-16

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9820
TOTAL EROSION OF PESTICIDE	.5384E-05
TOTAL RUNOFF OF PESTICIDE	.5368E-02
PESTICIDE LEACHED BELOW ROOT ZONE	.3504
TOTAL PESTICIDE IN CORE	.1267E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.2769E-09
CUMULATIVE ERROR	.6130E-07

PRZM Output Of Annual Pesticide Flux For Atrazine Under High Rainfall Year And CN: C

```
******************************
* ANNUAL PESTICIDE OUTPUT    *          PRZM OUTPUT: ATRAZINE
*                            *                       HIGH RAINFALL
* DATE:     31 DEC., 57      *                       CN: C
******************************
                               STORAGE UNITS IN KG/HA
                               FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.6475	.0000	.3518	.7275E-03
3	9	.0000	.0000	.5713E-01	.9806E-02	.0000	.4664E-01	.6907E-03
4	17	.0000	.0000	.6613E-02	.1989E-02	.0000	.4180E-02	.4495E-03
4	25	.0000	.0000	.9079E-04	.3002E-04	.0000	.4863E-04	.1215E-04
4	33	.0000	.0000	.4045E-06	.1402E-06	.0000	.1940E-06	.7025E-07
4	41	.0000	.0000	.8782E-09	.3121E-09	.0000	.3942E-09	.1720E-09
4	49	.0000	.0000	.1248E-11	.4494E-12	.0000	.5395E-12	.2593E-12
4	57	.0000	.0000	.1406E-14	.5095E-15	.0000	.5959E-15	.3007E-15

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9832
TOTAL EROSION OF PESTICIDE	.4166E-05
TOTAL RUNOFF OF PESTICIDE	.3985E-02
PESTICIDE LEACHED BELOW ROOT ZONE	.3518
TOTAL PESTICIDE IN CORE	.1278E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.2689E-10
CUMULATIVE ERROR	.7585E-07

PRZM Output Of Annual Pesticide Flux For Atrazine Under Average Rainfall Year And CN: A

```
*****************************          PRZM OUTPUT: ATRAZINE
* ANNUAL PESTICIDE OUTPUT  *                       AVERAGE RAINFALL
*                          *                       CN: A
* DATE:     31 DEC., 69    *
*****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CRROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.7453	.0000	.2515	.2614E-02
3	9	.0000	.0000	.1025E-01	.2984E-02	.0000	.6843E-02	.4276E-03
4	17	.0000	.0000	.1649E-03	.6959E-04	.0000	.7389E-04	.2141E-04
4	25	.0000	.0000	.1443E-06	.6338E-07	.0000	.5518E-07	.2576E-07
4	33	.0000	.0000	.4740E-10	.2118E-10	.0000	.1666E-10	.9555E-11
4	41	.0000	.0000	.9323E-14	.4199E-14	.0000	.3139E-14	.1985E-14
4	49	.0000	.0000	.1414E-17	.6388E-18	.0000	.4659E-18	.3089E-18
4	57	.0000	.0000	.1892E-21	.8544E-22	.0000	.6147E-22	.4180E-22

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9843
TOTAL EROSION OF PESTICIDE	.3278E-05
TOTAL RUNOFF OF PESTICIDE	.2829E-02
PESTICIDE LEACHED BELOW ROOT ZONE	.2515
TOTAL PESTICIDE IN CORE	.1285E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.6212E-10
CUMULATIVE ERROR	-.3704E-06

PRZM Output Of Annual Pesticide Flux For Atrazine Under Average Rainfall Year And CN: B

```
*****************************          PRZM OUTPUT: ATRAZINE
* ANNUAL PESTICIDE OUTPUT   *                        AVERAGE RAINFALL
*                           *                        CN: B
* DATE:      31 DEC., 69    *
*****************************
                            STORAGE UNITS IN KG/HA
                            FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.7426	.0000	.2548	.2605E-02
3	9	.0000	.0000	.1069E-01	.3081E-02	.0000	.7174E-02	.4379E-03
4	17	.0000	.0000	.1822E-03	.7628E-04	.0000	.8256E-04	.2338E-04
4	25	.0000	.0000	.1760E-06	.7673E-07	.0000	.6825E-07	.3105E-07
4	33	.0000	.0000	.6532E-10	.2838E-10	.0000	.2335E-10	.1298E-10
4	41	.0000	.0000	.1486E-13	.6644E-14	.0000	.5102E-14	.3112E-14
4	49	.0000	.0000	.2662E-17	.1194E-17	.0000	.8969E-18	.5706E-18
4	57	.0000	.0000	.4282E-21	.1920E-21	.0000	.1426E-21	.9265E-22

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9856
TOTAL EROSION OF PESTICIDE	.2057E-05
TOTAL RUNOFF OF PESTICIDE	.1439E-02
PESTICIDE LEACHED BELOW ROOT ZONE	.2548
TOTAL PESTICIDE IN CORE	.1293E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.2223E-09
CUMULATIVE ERROR	.1345E-06

PRZM Output Of Annual Pesticide Flux For Atrazine Under Average Rainfall Year And CN: C

```
*****************************
* ANNUAL PESTICIDE OUTPUT   *         PRZM OUTPUT: ATRAZINE
*                           *                      AVERAGE RAINFALL
* DATE:     31 DEC., 69     *                      CN: C
*****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

		FOLIAR APPLICATION	PREVIOUS STORAGE		DECAY		WASHOFF	CURRENT STORAGE
CANOPY		.0000	.0000		.0000		.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.7419	.0000	.2555	.2605E-02
3	9	.0000	.0000	.1101E-01	.3134E-02	.0000	.7431E-02	.4473E-03
4	17	.0000	.0000	.2009E-03	.8300E-04	.0000	.9230E-04	.2562E-04
4	25	.0000	.0000	.2211E-06	.9514E-07	.0000	.8744E-07	.3854E-07
4	33	.0000	.0000	.9833E-10	.4306E-10	.0000	.3611E-10	.1917E-10
4	41	.0000	.0000	.2840E-13	.1252E-13	.0000	.1009E-13	.5787E-14
4	49	.0000	.0000	.6828E-17	.3019E-17	.0000	.2335E-17	.1414E-17
4	57	.0000	.0000	.1536E-20	.6793E-21	.0000	.5359E-21	.3198E-21

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9862
TOTAL EROSION OF PESTICIDE	.1230E-05
TOTAL RUNOFF OF PESTICIDE	.8082E-03
PESTICIDE LEACHED BELOW ROOT ZONE	.2555
TOTAL PESTICIDE IN CORE	.1300E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.1238E-09
CUMULATIVE ERROR	.1067E-06

PRZM Output Of Annual Pesticide Flux For Atrazine Under Low Rainfall Year And CN: A

```
*****************************
* ANNUAL PESTICIDE OUTPUT  *   PRZM OUTPUT :  ATRAZINE
*                          *                  LOW RAINFALL YEAR
* DATE:     31 DEC., 54    *                  CN: A
*****************************
```

STORAGE UNITS IN KG/HA
FLUX UNITS IN KG/HA/OUTPUT TIMESTEP

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.8778	.0000	.1150	.7150E-02
3	11	.0000	.0000	.9424E-04	.4645E-04	.0000	.4296E-04	.4834E-05
4	21	.0000	.0000	.4513E-08	.2782E-08	.0000	.1394E-08	.3370E-09
4	31	.0000	.0000	.1698E-13	.1110E-13	.0000	.4234E-14	.1643E-14

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9842
TOTAL EROSION OF PESTICIDE	.3085E-05
TOTAL RUNOFF OF PESTICIDE	.2892E-02
PESTICIDE LEACHED BELOW ROOT ZONE	.1150
TOTAL PESTICIDE IN CORE	.1295E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.1056E-09
CUMULATIVE ERROR	.2113E-06

PRZM Output Of Annual Pesticide Flux For Atrazine Under Low Rainfall Year And CN: B

```
1****************************
* ANNUAl PESTICIDE OUTPUT  *   PRZM OUTPUT : ATRAZINE
*                          *                 LOW RAINFALL
* DATE:     31 DEC., 54    *                 CN: B
****************************
                              STORAGE UNITS IN KG/HA
                              FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.8765	.0000	.1164	.7150E-02
3	11	.0000	.0000	.1053E-03	.5136E-04	.0000	.4867E-04	.5285E-05
4	21	.0000	.0000	.6003E-08	.3672E-08	.0000	.1834E-08	.4366E-09
4	31	.0000	.0000	.2853E-13	.1859E-13	.0000	.7252E-14	.2685E-14

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9854
TOTAL EROSION OF PESTICIDE	.1991E-05
TOTAL RUNOFF OF PESTICIDE	.1542E-02
PESTICIDE LEACHED BELOW ROOT ZONE	.1164
TOTAL PESTICIDE IN CORE	.1302E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	-.3747E-09
CUMULATIVE ERROR	.3617E-06

PRZM Output Of Annual Pesticide Flux For Atrazine Under Low Rainfall Year And CN: C

```
1****************************
* ANNUAL PESTICIDE OUTPUT *   PRZM OUTPUT : ATRAZINE
*                         *                 LOW RAINFALL
* DATE:     31 DEC., 54   *                 CN: C
****************************
                             STORAGE UNITS IN KG/HA
                             FLUX UNITS IN KG/HA/OUTPUT TIMESTEP
```

CURRENT CONDITIONS

CROP NUMBER 1

FLUXES AND STORAGES FOR THIS PERIOD

	FOLIAR APPLICATION	PREVIOUS STORAGE	DECAY	WASHOFF	CURRENT STORAGE
CANOPY	.0000	.0000	.0000	.0000	.0000

HORIZON	COMPARTMENT	SOIL APPLICATION	PREVIOUS STORAGE	LEACHING INPUT	DECAY *	PLANT UPTAKE	LEACHING OUTPUT	CURRENT STORAGE
1	1	1.000	.0000	.0000	.8758	.0000	.1171	.7150E-02
3	11	.0000	.0000	.1120E-03	.5433E-04	.0000	.5215E-04	.5567E-05
4	21	.0000	.0000	.6958E-08	.4240E-08	.0000	.2217E-08	.5003E-09
4	31	.0000	.0000	.3752E-13	.2435E-13	.0000	.9705E-14	.3465E-14

* DECAY FOR COMPARTMENT 1 INCLUDES EROSION AND WASHOFF LOSS.

SUMMARY FLUXES AND STORAGES FOR SOIL

TOTAL PLANT UPTAKE OF PESTICIDE	.0000
TOTAL DECAY OF PESTICIDE	.9861
TOTAL EROSION OF PESTICIDE	.1237E-05
TOTAL RUNOFF OF PESTICIDE	.8461E-03
PESTICIDE LEACHED BELOW ROOT ZONE	.1171
TOTAL PESTICIDE IN CORE	.1307E-01

MATERIAL BALANCE

PESTICIDE BALANCE ERROR	.2188E-09
CUMULATIVE ERROR	.1728E-06

APPENDIX D

GLEAMS OUTPUT OF PESTICIDE FLUX

GLEAMS Output Of Annual Pesticide Flux For Dicama Under High Rainfall Year And CN: A

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : HIGH RAINFALL YEAR, 1957

STARTING DATE FOR SIMULATION 57001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.00	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

STORM SUMMARY

96 STORMS PRODUCED	113.49 CM. OF RAINFALL
3 STORMS PRODUCED	1.02 CM. OF RUNOFF
37 STORMS PRODUCED	56.69 CM. OF PERCOLATION
3 STORMS PRODUCED	0.01 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
DICAMBA	0.0000	0.00	0.0000	0.00	352.7308	35.27	352.7308	35.27

57365 WATMAS= .00000E+00 SOILPEST= .00000E+00 PSTMAS= .00000E+00

YEAR DEGRAD= 0.550544E+03 YEAR TRNOUT= 0.965349E+02

H2OLOSS= .00000E+00 SEDLOSS= .00000E+00 PRCLOSS=0.352731E+03

GLEAMS Output Of Annual Pesticide Flux For Dicama
Under High Rainfall Year And CN: B

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : HIGH RAINFALL YEAR, CN: B

STARTING DATE FOR SIMULATION 57001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.00	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

STORM SUMMARY

96 STORMS PRODUCED 113.49 CM. OF RAINFALL
2 STORMS PRODUCED 0.73 CM. OF RUNOFF
37 STORMS PRODUCED 56.99 CM. OF PERCOLATION
2 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
DICAMBA	0.0000	0.00	0.0000	0.00	352.7308	35.27	352.7308	35.27

57365 WATMAS= .00000E+00 SOILPEST= .00000E+00 PSTMAS= .00000E+00

TOTAL DEGRADED= 0.550544E+03 TOTAL TRNOUT= 0.965349E+02

GLEAMS Output Of Annual Pesticide Flux For Dicama Under High Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : HIGH RAINFALL YEAR, CN: C

STARTING DATE FOR SIMULATION 57001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.00	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

STORM SUMMARY

96 STORMS PRODUCED 113.49 CM. OF RAINFALL
3 STORMS PRODUCED 1.02 CM. OF RUNOFF
37 STORMS PRODUCED 56.69 CM. OF PERCOLATION
3 STORMS PRODUCED 0.01 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
DICAMBA	0.0000	0.00	0.0000	0.00	352.7308	35.27	352.7308	35.27

57365 WATMAS= .00000E+00 SOILPEST= .00000E+00 PSTMAS= .00000E+00

YEAR DEGRAD= 0.550544E+03 YEAR TRNOUT= 0.965349E+02

GLEAMS Output Of Annual Pesticide Flux For Dicamba Under Average Rainfall Year And CN: A

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : AVERAGE RAINFALL YEAR, CN: A

STARTING DATE FOR SIMULATION 69001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.00	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

ANNUAL SUMMARY FOR 1969
----

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
DICAMBA	0.0000	0.00	0.0000	0.00	350.1909	35.02	350.1909	35.02

WATMAS= .00000E+00 SOILPEST= .00000E+00 PSTMAS= .00000E+00

YEAR DECAY= 0.622581E+03, YEAR TRNOUT= 0.271138E+02

H2OLOS= .00000E+00 SEDLOS= .00000E+00 PRCLOS=0.350191E+03

GLEAMS Output Of Annual Pesticide Flux For Dicamba Under Average Rainfall Year And CN: B

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : AVERAGE RAINFALL YEAR, CN: B

STARTING DATE FOR SIMULATION 69001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.00	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

ANNUAL SUMMARY FOR 1969

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
DICAMBA	0.0000	0.00	0.0000	0.00	350.1909	35.02	350.1909	35.02

WATMAS= .00000E+00 SOILPEST= .00000E+00 PSTMAS= .00000E+00

YEAR DECAY= 0.622581E+03, YEAR TRNOUT= 0.271138E+02

H2OLOS= .00000E+00 SEDLOS= .00000E+00 PRCLOS=0.350191E+03

GLEAMS Output Of Annual Pesticide Flux For Dicamba Under Average Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : AVERAGE RAINFALL YEAR, CN: C

STARTING DATE FOR SIMULATION 69001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.00	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

ANNUAL SUMMARY FOR 1969

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
DICAMBA	0.0000	0.00	0.0000	0.00	350.1909	35.02	350.1909	35.02

WATMAS= .00000E+00 SOILPEST= .00000E+00 PSTMAS= .00000E+00

YEAR DECAY= 0.622581E+03 YEAR TRNOUT= 0.271138E+02

GLEAMS Output Of Annual Pesticide Flux For Dicamba Under Low Rainfall Year And CN: A

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : LOW RAINFALL YEAR, CN: A

STARTING DATE FOR SIMULATION 54001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 54031 TO 54365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.00	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

ANNUAL SUMMARY FOR 1954

42 STORMS PRODUCED 30.23 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
8 STORMS PRODUCED 8.91 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
DICAMBA	0.0000	0.00	0.0000	0.00	124.8966	12.49	124.8966	12.49

YEAR DEGRAD= 0.856793E+03 YEAR TRNOUT= 0.180359E+02

GLEAMS Output Of Annual Pesticide Flux For Dicamba Under Low Rainfall Year And CN: B

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : LOW RAINFALL YEAR , CN: B

STARTING DATE FOR SIMULATION 54001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 54031 TO 54365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.00	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

ANNUAL SUMMARY FOR 1954

42 STORMS PRODUCED 30.23 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
8 STORMS PRODUCED 8.91 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
DICAMBA	0.0000	0.00	0.0000	0.00	124.8966	12.49	124.8966	12.49

YEAR DEGRAD= 0.856793E+03 YEAR TRNOUT= 0.180359E+02

GLEAMS Output Of Annual Pesticide Flux For Dicamba Under Low Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : DICAMBA : LOW RAINFALL YEAR , 1954

STARTING DATE FOR SIMULATION 54001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 54031 TO 54365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	DICAMBA	4500.0	9.3	35.2	1.9	0.00	0	0.00	0.00	0.39

ANNUAL SUMMARY FOR 1954

42 STORMS PRODUCED 30.23 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
8 STORMS PRODUCED 8.91 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
DICAMBA	0.0000	0.00	0.0000	0.00	124.8966	12.49	124.8966	12.49

YEAR DEGRAD= 0.856793E+03 YEAR TRNOUT= 0.180359E+02

GLEAMS Output Of Annual Pesticide Flux For 2,4-D
Under High Rainfall Year And CN: A

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPSTHI
***** PESTICIDE : 2,4 - D : HIGH RAINFALL YEAR, CN: A

STARTING DATE FOR SIMULATION 57001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

ANNUAL SUMMARY FOR 1957
----

96 STORMS PRODUCED 113.49 CM. OF RAINFALL
3 STORMS PRODUCED 1.02 CM. OF RUNOFF
37 STORMS PRODUCED 56.69 CM. OF PERCOLATION
3 STORMS PRODUCED 0.01 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0601	0.01	0.0601	0.01

YEAR DEGRAD= 0.997146E+03 YEAR TRNOUT= 0.229265E+01

GLEAMS Output Of Annual Pesticide Flux For 2,4-D Under High Rainfall Year And CN: B

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPSTHI
***** PESTICIDE : 2,4 - D : HIGH RAINFALL YEAR, CN: B

STARTING DATE FOR SIMULATION 57001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

ANNUAL SUMMARY FOR 1957

96 STORMS PRODUCED 113.49 CM. OF RAINFALL
2 STORMS PRODUCED 0.73 CM. OF RUNOFF
37 STORMS PRODUCED 56.99 CM. OF PERCOLATION
2 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0601	0.01	0.0601	0.01

YEAR DEGRAD= 0.997146E+03 YEAR TRNOUT= 0.229265E+01

GLEAMS Output Of Annual Pesticide Flux For 2,4-D Under High Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPSTHI
***** PESTICIDE : 2,4 - D : HIGH RAINFALL YEAR, CN: C

STARTING DATE FOR SIMULATION 57001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

ANNUAL SUMMARY FOR 1957

96 STORMS PRODUCED 113.49 CM. OF RAINFALL
2 STORMS PRODUCED 0.63 CM. OF RUNOFF
37 STORMS PRODUCED 57.08 CM. OF PERCOLATION
2 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0601	0.01	0.0601	0.01

YEAR DEGRAD= 0.997146E+03 YEAR TRNOUT= 0.229265E+01

GLEAMS Output Of Annual Pesticide Flux For 2,4-D Under Average Rainfall Year And CN: A

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : 2,4 - D : AVERAGE RAINFALL YEAR, CN: A

STARTING DATE FOR SIMULATION 69001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

ANNUAL SUMMARY FOR 1969

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0199	0.00	0.0199	0.00

YEAR DEGRAD= 0.999214E+03 YEAR TRNOUT= 0.312088E+00

GLEAMS Output Of Annual Pesticide Flux For 2,4-D
Under Average Rainfall Year And CN: B

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : 2,4 - D : AVERAGE RAINFALL YEAR, CN: B

STARTING DATE FOR SIMULATION 69001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

ANNUAL SUMMARY FOR 1969
----

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0199	0.00	0.0199	0.00

YEAR DEGRAD= 0.999214E+03 YEAR TRNOUT= 0.312088E+00

GLEAMS Output Of Annual Pesticide Flux For 2,4-D
Under Average Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : 2,4 - D : AVERAGE RAINFALL YEAR, CN: C

STARTING DATE FOR SIMULATION 69000 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

NO. 1 69032 RATE 1.00 DEPTH 10.0 FOLFRC 0.00 SOLFRC 1.00 THRWSH 0.00 METHOD 1

ANNUAL SUMMARY FOR 1969

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0199	0.00	0.0199	0.00

YEAR DEGRAD= 0.999214E+03 YEAR TRNOUT= 0.312088E+00

GLEAMS Output Of Annual Pesticide Flux For 2,4-D Under Low Rainfall Year And CN: A

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 G L E A M S  NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
          VERSION 1.8.5.2  JAN 12, 1987   TIFTON GA

 *****   GLEAMS PESTICIDE DATA SET : GRPST.PAR
 *****   PESTICIDE  :  2,4 - D     : LOW RAINFALL YEAR, 1954
 *****   CN: A

       STARTING DATE FOR SIMULATION 54001 JULIAN DATE

                 ROOTING DEPTH      225.04 MM

                   PESTICIDE INPUTS
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          SIMULATION FOR THE PERIOD 54031 TO 54365
          SIMULATION FOR    1 PESTICIDES.
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PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

NO. 1   54032 RATE 1.00 DEPTH 10.0 FOLFRC 0.00 SOLFRC 1.00 THRWSH 0.00 METHOD 1

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                ANNUAL SUMMARY FOR 1954
                -----------------------

         42 STORMS PRODUCED    30.23 CM. OF RAINFALL
          0 STORMS PRODUCED     0.00 CM. OF RUNOFF
          8 STORMS PRODUCED     8.91 CM. OF PERCOLATION
          0 STORMS PRODUCED     0.00 T/HA OF SEDIMENT
```

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0002	0.00	0.0002	0.00

YEAR DEGRAD= 0.999779E+03   YEAR TRNOUT= 0.934556E-03

GLEAMS Output Of Annual Pesticide Flux For 2,4-D Under Low Rainfall Year And CN: B

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G L E A M S  NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
         VERSION 1.8.5.2  JAN 12, 1987   TIFTON GA

*****    GLEAMS PESTICIDE DATA SET : GRPST.PAR
*****    PESTICIDE  :  2,4 - D     : LOW RAINFALL YEAR, 1954
*****    CN: B

      STARTING DATE FOR SIMULATION 54001 JULIAN DATE

                ROOTING DEPTH      225.04 MM

                  PESTICIDE INPUTS
                  ----------------

         SIMULATION FOR THE PERIOD 54031 TO 54365
         SIMULATION FOR   1 PESTICIDES.
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PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

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NO.  1   54032 RATE 1.00 DEPTH 10.0 FOLFRC 0.00 SOLFRC 1.00 THRWSH 0.00 METHOD  1

                ANNUAL SUMMARY FOR 1954
                -----------------------

         42 STORMS PRODUCED    30.23 CM. OF RAINFALL
          0 STORMS PRODUCED     0.00 CM. OF RUNOFF
          8 STORMS PRODUCED     8.91 CM. OF PERCOLATION
          0 STORMS PRODUCED     0.00 T/HA OF SEDIMENT

                  PESTICIDE LOSSES
```

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0002	0.00	0.0002	0.00

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YEAR DEGRAD= 0.999779E+03   YEAR TRNOUT= 0.934556E-03
```

GLEAMS Output Of Annual Pesticide Flux For 2,4-D Under Low Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : 2,4 - D : LOW RAINFALL YEAR, 1954
***** CN: C

STARTING DATE FOR SIMULATION 54001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 54031 TO 54365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	(2,4-D)	900.00	8.9	6.7	398.1	0.00	0	0.00	0.00	0.51

NO. 1 54032 RATE 1.00 DEPTH 10.0 FOLFRC 0.00 SOLFRC 1.00 THRWSH 0.00 METHOD 1

ANNUAL SUMMARY FOR 1954

42 STORMS PRODUCED 30.23 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
8 STORMS PRODUCED 8.91 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
(2,4-D)	0.0000	0.00	0.0000	0.00	0.0002	0.00	0.0002	0.00

YEAR DEGRAD= 0.999779E+03 YEAR TRNOUT= 0.934556E-03

GLEAMS Output Of Annual Pesticide Flux For Atrazine
Under High Rainfall Year And CN: A

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : HIGH RAINFALL YEAR, CN: A

STARTING DATE FOR SIMULATION 57001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

ANNUAL SUMMARY FOR 1957
----

96 STORMS PRODUCED 113.49 CM. OF RAINFALL
3 STORMS PRODUCED 1.02 CM. OF RUNOFF
37 STORMS PRODUCED 56.69 CM. OF PERCOLATION
3 STORMS PRODUCED 0.01 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	266.9216	26.69	266.9216	26.69

YEAR DEGRAD= 0.690912E+03 YEAR TRNOUT= 0.418968E+02

GLEAMS Output Of Annual Pesticide Flux For Atrazine Under High Rainfall Year And CN: B

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : HIGH RAINFALL YEAR, CN: B

STARTING DATE FOR SIMULATION 57001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

ANNUAL SUMMARY FOR 1957

96 STORMS PRODUCED 113.49 CM. OF RAINFALL
2 STORMS PRODUCED 0.73 CM. OF RUNOFF
37 STORMS PRODUCED 56.99 CM. OF PERCOLATION
2 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	266.9906	26.70	266.9906	26.70

YEAR DEGRAD= 0.690847E+03 YEAR TRNOUT= 0.418968E+02

GLEAMS Output Of Annual Pesticide Flux For Atrazine Under High Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : HIGH RAINFALL YEAR, CN: C

STARTING DATE FOR SIMULATION 57000 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 57031 TO 57365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

NO. 1 57032 RATE 1.00 DEPTH 10.0 FOLFRC 0.00 SOLFRC 1.00 THRWSH 0.00 METHOD 1

ANNUAL SUMMARY FOR 1957

96 STORMS PRODUCED 113.49 CM. OF RAINFALL
2 STORMS PRODUCED 0.63 CM. OF RUNOFF
37 STORMS PRODUCED 57.08 CM. OF PERCOLATION
2 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	267.0157	26.70	267.0157	26.70

YEAR DEGRAD= 0.690823E+03 YEAR TRNOUT= 0.418968E+02

GLEAMS Output Of Annual Pesticide Flux For Atrazine Under Average Rainfall Year And CN: A

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : AVERAGE RAINFALL YEAR, CN: A

STARTING DATE FOR SIMULATION 69001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

NO. 1 69032 RATE 1.00 DEPTH 10.0 FOLFRC 0.00 SOLFRC 1.00 THRWSH 0.00 METHOD 1

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	139.6995	13.97	139.6995	13.97

YEAR DEGRAD= 0.845217E+03 YEAR TRNOUT= 0.129685E+02

GLEAMS Output Of Annual Pesticide Flux For Atrazine Under Average Rainfall Year And CN: B

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : AVERAGE RAINFALL YEAR, CN: B

STARTING DATE FOR SIMULATION 69001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

ANNUAL SUMMARY FOR 1969

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	139.6995	13.97	139.6995	13.97

YEAR DEGRAD= 0.845217E+03 YEAR TRNOUT= 0.129685E+02

GLEAMS Output Of Annual Pesticide Flux For Atrazine Under Average Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : AVERAGE RAINFALL YEAR, CN: C

STARTING DATE FOR SIMULATION 69000 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 69031 TO 69365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

NO. 1 69032 RATE 1.00 DEPTH 10.0 FOLFRC 0.00 SOLFRC 1.00 THRWSH 0.00 METHOD 1

ANNUAL SUMMARY FOR 1969

74 STORMS PRODUCED 68.15 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
20 STORMS PRODUCED 23.84 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	139.6995	13.97	139.6995	13.97

YEAR DEGRAD= 0.845217E+03 YEAR TRNOUT= 0.129685E+02

GLEAMS Output Of Annual Pesticide Flux For Atrazine Under Low Rainfall Year And CN: A

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : LOW RAINFALL YEAR, CN: A

STARTING DATE FOR SIMULATION 54001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 54031 TO 54365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

ANNUAL SUMMARY FOR 1954
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42 STORMS PRODUCED 30.23 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
8 STORMS PRODUCED 8.91 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	43.4099	4.34	43.4099	4.34

YEAR DEGRAD= 0.941173E+03 YEAR TRNOUT= 0.582462E+01

GLEAMS Output Of Annual Pesticide Flux For Atrazine
Under Low Rainfall Year And CN: B

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : LOW RAINFALL YEAR, CN: B

STARTING DATE FOR SIMULATION 54001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 54031 TO 54365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

ANNUAL SUMMARY FOR 1954

42 STORMS PRODUCED 30.23 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
8 STORMS PRODUCED 8.91 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF		SEDIMENT		PERCOLATION		TOTAL	
	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.	G/HA	% APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	43.4099	4.34	43.4099	4.34

YEAR DEGRAD= 0.941173E+03 YEAR TRNOUT= 0.582462E+01

GLEAMS Output Of Annual Pesticide Flux For Atrazine Under Low Rainfall Year And CN: C

G L E A M S NONPOINT SOURCE POLLUTION MODEL (PESTICIDES)
VERSION 1.8.5.2 JAN 12, 1987 TIFTON GA

***** GLEAMS PESTICIDE DATA SET : GRPST.PAR
***** PESTICIDE : ATRAZINE : LOW RAINFALL YEAR, CN: C

STARTING DATE FOR SIMULATION 54001 JULIAN DATE

ROOTING DEPTH 225.04 MM

PESTICIDE INPUTS

SIMULATION FOR THE PERIOD 54031 TO 54365
SIMULATION FOR 1 PESTICIDES.

PEST. NO.	PESTICIDE NAME	WATER SOL. (PPM)	FOLIAR HAFLIF (DAYS)	SOIL HAFLIF (DAYS)	KOC	FOLIAR RES. (UG/G)	SOIL RES. FLAG	WSHOFF FRAC.	COEFF TRANS	COEFF UPTAKE
1	ATRAZINE	33.00	2.0	52.9	173.8	0.00	0	0.00	0.00	0.65

ANNUAL SUMMARY FOR 1954

42 STORMS PRODUCED 30.23 CM. OF RAINFALL
0 STORMS PRODUCED 0.00 CM. OF RUNOFF
8 STORMS PRODUCED 8.91 CM. OF PERCOLATION
0 STORMS PRODUCED 0.00 T/HA OF SEDIMENT

PESTICIDE LOSSES

PESTICIDE	RUNOFF G/HA	RUNOFF % APP.	SEDIMENT G/HA	SEDIMENT % APP.	PERCOLATION G/HA	PERCOLATION % APP.	TOTAL G/HA	TOTAL % APP.
ATRAZINE	0.0000	0.00	0.0000	0.00	43.4099	4.34	43.4099	4.34

YEAR DEGRAD= 0.941173E+03 YEAR TRNOUT= 0.582462E+01

APPENDIX E

PRZM OUTPUT OF PESTICIDE CONCENTRATION

PRZM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: DICAMBA HIGH RAINFALL CN: A

DATE (DAY-MONTH-YEAR) 31 DEC., 57

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.2111E-16	.3792E-17	.2230E-15
2	3	.8286E-15	.4186E-16	.1325E-13
2	5	.5972E-14	.3017E-15	.9546E-13
3	7	.5064E-13	.1997E-14	.7461E-12
3	9	.5666E-12	.1738E-13	.7793E-11
3	11	.4666E-11	.1431E-12	.6418E-10
3	13	.3074E-10	.9428E-12	.4228E-09
3	15	.2124E-09	.7262E-11	.2625E-08
4	17	.2183E-08	.8522E-10	.2291E-07
4	19	.1238E-07	.4834E-09	.1300E-06
4	21	.5182E-07	.2023E-08	.5438E-06
4	23	.1717E-06	.6702E-08	.1802E-05
4	25	.4710E-06	.1839E-07	.4943E-05
4	27	.1105E-05	.4314E-07	.1160E-04
4	29	.2270E-05	.8861E-07	.2382E-04
4	31	.4155E-05	.1622E-06	.4361E-04
4	33	.6880E-05	.2686E-06	.7221E-04
4	35	.1042E-04	.4069E-06	.1094E-03
4	37	.1459E-04	.5697E-06	.1531E-03
4	39	.1903E-04	.7428E-06	.1997E-03
4	41	.2327E-04	.9086E-06	.2443E-03
4	43	.2686E-04	.1049E-05	.2819E-03
4	45	.2942E-04	.1148E-05	.3087E-03
4	47	.3069E-04	.1198E-05	.3221E-03
4	49	.3064E-04	.1196E-05	.3216E-03
4	51	.2937E-04	.1147E-05	.3083E-03
4	53	.2712E-04	.1059E-05	.2847E-03
4	55	.2419E-04	.9445E-06	.2539E-03
4	57	.2090E-04	.8160E-06	.2193E-03
4	59	.1753E-04	.6843E-06	.1839E-03
4	61	.1430E-04	.5582E-06	.1501E-03
4	63	.1137E-04	.4438E-06	.1193E-03
4	65	.8826E-05	.3446E-06	.9263E-04
4	67	.6701E-05	.2616E-06	.7032E-04
4	69	.4982E-05	.1945E-06	.5229E-04

PRZM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: A (Continue)

4	71	.3633E-05	.1418E-06	.3813E-04
4	73	.2602E-05	.1016E-06	.2730E-04
4	75	.1831E-05	.7150E-07	.1922E-04
4	77	.1269E-05	.4954E-07	.1332E-04
4	79	.8660E-06	.3381E-07	.9088E-05
4	81	.5828E-06	.2275E-07	.6116E-05
4	83	.3871E-06	.1511E-07	.4062E-05
4	85	.2539E-06	.9913E-08	.2665E-05
4	87	.1646E-06	.6428E-08	.1728E-05
4	89	.1056E-06	.4122E-08	.1108E-05
4	91	.6703E-07	.2617E-08	.7035E-06
4	93	.4214E-07	.1645E-08	.4423E-06
4	95	.2625E-07	.1025E-08	.2755E-06
4	97	.1622E-07	.6332E-09	.1702E-06
4	99	.9938E-08	.3880E-09	.1043E-06
4	101	.6044E-08	.2360E-09	.6343E-07
4	103	.3649E-08	.1425E-09	.3830E-07
4	105	.2189E-08	.8546E-10	.2297E-07
4	107	.1305E-08	.5094E-10	.1369E-07
4	109	.7731E-09	.3018E-10	.8114E-08
4	111	.4555E-09	.1779E-10	.4781E-08
4	113	.2670E-09	.1043E-10	.2802E-08
4	115	.1558E-09	.6081E-11	.1635E-08
4	117	.9043E-10	.3531E-11	.9491E-09
4	119	.5228E-10	.2041E-11	.5487E-09
4	121	.3010E-10	.1175E-11	.3159E-09
4	123	.1726E-10	.6740E-12	.1812E-09
4	125	.9866E-11	.3852E-12	.1035E-09
4	127	.5620E-11	.2194E-12	.5898E-10
4	129	.3191E-11	.1246E-12	.3349E-10
4	131	.1807E-11	.7054E-13	.1896E-10
4	133	.1020E-11	.3983E-13	.1071E-10
4	135	.5747E-12	.2244E-13	.6031E-11
4	137	.3229E-12	.1261E-13	.3389E-11
4	139	.1811E-12	.7069E-14	.1900E-11
4	141	.1013E-12	.3953E-14	.1063E-11
4	143	.5647E-13	.2205E-14	.5926E-12
4	145	.3139E-13	.1225E-14	.3294E-12
4	147	.1738E-13	.6786E-15	.1824E-12
4	149	.9583E-14	.3741E-15	.1006E-12
4	151	.5257E-14	.2052E-15	.5517E-13
4	153	.2867E-14	.1120E-15	.3009E-13
4	155	.1555E-14	.6071E-16	.1632E-13

PRZM Output Of Pesticide Concentration For Dicamba
Under High Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT: DICAMBA
HIGH RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 57   CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.2111E-16	.3792E-17	.2230E-15
2	3	.7284E-15	.3680E-16	.1164E-13
2	5	.5157E-14	.2605E-15	.8244E-13
3	7	.4303E-13	.1697E-14	.6340E-12
3	9	.4748E-12	.1457E-13	.6532E-11
3	11	.3885E-11	.1192E-12	.5344E-10
3	13	.2555E-10	.7837E-12	.3514E-09
3	15	.1768E-09	.6046E-11	.2186E-08
4	17	.1830E-08	.7146E-10	.1921E-07
4	19	.1047E-07	.4087E-09	.1099E-06
4	21	.4420E-07	.1726E-08	.4639E-06
4	23	.1478E-06	.5769E-08	.1551E-05
4	25	.4093E-06	.1598E-07	.4295E-05
4	27	.9694E-06	.3785E-07	.1017E-04
4	29	.2011E-05	.7850E-07	.2110E-04
4	31	.3718E-05	.1452E-06	.3902E-04
4	33	.6220E-05	.2428E-06	.6527E-04
4	35	.9522E-05	.3717E-06	.9993E-04
4	37	.1347E-04	.5260E-06	.1414E-03
4	39	.1776E-04	.6934E-06	.1864E-03
4	41	.2197E-04	.8576E-06	.2305E-03
4	43	.2565E-04	.1001E-05	.2692E-03
4	45	.2841E-04	.1109E-05	.2982E-03
4	47	.3000E-04	.1171E-05	.3148E-03
4	49	.3031E-04	.1184E-05	.3182E-03
4	51	.2942E-04	.1149E-05	.3088E-03
4	53	.2751E-04	.1074E-05	.2887E-03
4	55	.2486E-04	.9705E-06	.2609E-03
4	57	.2176E-04	.8495E-06	.2284E-03
4	59	.1849E-04	.7220E-06	.1941E-03
4	61	.1529E-04	.5971E-06	.1605E-03
4	63	.1233E-04	.4814E-06	.1294E-03
4	65	.9709E-05	.3791E-06	.1019E-03
4	67	.7478E-05	.2920E-06	.7849E-04
4	69	.5643E-05	.2203E-06	.5922E-04
4	71	.4177E-05	.1631E-06	.4384E-04

PRZM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: B (Continue)

4	73	.3037E-05	.1186E-06	.3187E-04
4	75	.2171E-05	.8477E-07	.2279E-04
4	77	.1528E-05	.5966E-07	.1604E-04
4	79	.1060E-05	.4137E-07	.1112E-04
4	81	.7249E-06	.2830E-07	.7608E-05
4	83	.4895E-06	.1911E-07	.5137E-05
4	85	.3265E-06	.1275E-07	.3427E-05
4	87	.2153E-06	.8408E-08	.2260E-05
4	89	.1405E-06	.5486E-08	.1475E-05
4	91	.9078E-07	.3544E-08	.9528E-06
4	93	.5810E-07	.2268E-08	.6098E-06
4	95	.3685E-07	.1439E-08	.3868E-06
4	97	.2319E-07	.9052E-09	.2433E-06
4	99	.1447E-07	.5651E-09	.1519E-06
4	101	.8968E-08	.3501E-09	.9413E-07
4	103	.5519E-08	.2155E-09	.5793E-07
4	105	.3375E-08	.1318E-09	.3542E-07
4	107	.2051E-08	.8008E-10	.2153E-07
4	109	.1240E-08	.4839E-10	.1301E-07
4	111	.7451E-09	.2909E-10	.7820E-08
4	113	.4456E-09	.1740E-10	.4677E-08
4	115	.2653E-09	.1036E-10	.2784E-08
4	117	.1572E-09	.6139E-11	.1650E-08
4	119	.9281E-10	.3623E-11	.9740E-09
4	121	.5457E-10	.2130E-11	.5727E-09
4	123	.3197E-10	.1248E-11	.3355E-09
4	125	.1867E-10	.7288E-12	.1959E-09
4	127	.1086E-10	.4242E-12	.1140E-09
4	129	.6305E-11	.2462E-12	.6617E-10
4	131	.3649E-11	.1425E-12	.3830E-10
4	133	.2107E-11	.8225E-13	.2211E-10
4	135	.1213E-11	.4738E-13	.1274E-10
4	137	.6975E-12	.2723E-13	.7320E-11
4	139	.4001E-12	.1562E-13	.4199E-11
4	141	.2290E-12	.8940E-14	.2403E-11
4	143	.1307E-12	.5104E-14	.1372E-11
4	145	.7445E-13	.2906E-14	.7813E-12
4	147	.4225E-13	.1649E-14	.4434E-12
4	149	.2388E-13	.9323E-15	.2506E-12
4	151	.1343E-13	.5245E-15	.1410E-12
4	153	.7519E-14	.2935E-15	.7891E-13
4	155	.4184E-14	.1633E-15	.4391E-13
4	157	.2314E-14	.9034E-16	.2428E-13
4	159	.1272E-14	.4965E-16	.1335E-13

PRZM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: DICAMBA
HIGH RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 57 CN: C

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.2111E-16	.3792E-17	.2230E-15
2	3	.6051E-15	.3057E-16	.9673E-14
2	5	.4165E-14	.2104E-15	.6658E-13
3	7	.3401E-13	.1341E-14	.5011E-12
3	9	.3706E-12	.1137E-13	.5098E-11
3	11	.3025E-11	.9278E-13	.4160E-10
3	13	.1993E-10	.6114E-12	.2742E-09
3	15	.1387E-09	.4742E-11	.1714E-08
4	17	.1452E-08	.5669E-10	.1524E-07
4	19	.8400E-08	.3279E-09	.8816E-07
4	21	.3587E-07	.1400E-08	.3764E-06
4	23	.1213E-06	.4736E-08	.1273E-05
4	25	.3399E-06	.1327E-07	.3567E-05
4	27	.8148E-06	.3181E-07	.8552E-05
4	29	.1711E-05	.6679E-07	.1795E-04
4	31	.3203E-05	.1251E-06	.3362E-04
4	33	.5427E-05	.2119E-06	.5695E-04
4	35	.8417E-05	.3286E-06	.8834E-04
4	37	.1207E-04	.4712E-06	.1267E-03
4	39	.1613E-04	.6298E-06	.1693E-03
4	41	.2024E-04	.7901E-06	.2124E-03
4	43	.2397E-04	.9359E-06	.2516E-03
4	45	.2695E-04	.1052E-05	.2829E-03
4	47	.2890E-04	.1128E-05	.3033E-03
4	49	.2966E-04	.1158E-05	.3113E-03
4	51	.2926E-04	.1142E-05	.3070E-03
4	53	.2781E-04	.1086E-05	.2919E-03
4	55	.2556E-04	.9979E-06	.2682E-03
4	57	.2276E-04	.8888E-06	.2389E-03
4	59	.1970E-04	.7690E-06	.2067E-03
4	61	.1659E-04	.6477E-06	.1741E-03
4	63	.1363E-04	.5321E-06	.1430E-03
4	65	.1094E-04	.4271E-06	.1148E-03
4	67	.8594E-05	.3355E-06	.9020E-04
4	69	.6618E-05	.2584E-06	.6945E-04
4	71	.5001E-05	.1952E-06	.5249E-04

PRZM Output Of Pesticide Concentration For Dicamba
Under High Rainfall Year And CN: C (Continue)

4	73	.3714E-05	.1450E-06	.3898E-04
4	75	.2714E-05	.1059E-06	.2848E-04
4	77	.1953E-05	.7624E-07	.2050E-04
4	79	.1386E-05	.5410E-07	.1454E-04
4	81	.9702E-06	.3788E-07	.1018E-04
4	83	.6709E-06	.2619E-07	.7041E-05
4	85	.4586E-06	.1791E-07	.4813E-05
4	87	.3102E-06	.1211E-07	.3255E-05
4	89	.2076E-06	.8106E-08	.2179E-05
4	91	.1377E-06	.5376E-08	.1445E-05
4	93	.9051E-07	.3534E-08	.9499E-06
4	95	.5900E-07	.2304E-08	.6192E-06
4	97	.3817E-07	.1490E-08	.4006E-06
4	99	.2452E-07	.9571E-09	.2573E-06
4	101	.1564E-07	.6106E-09	.1641E-06
4	103	.9915E-08	.3871E-09	.1041E-06
4	105	.6249E-08	.2440E-09	.6559E-07
4	107	.3917E-08	.1529E-09	.4111E-07
4	109	.2443E-08	.9538E-10	.2564E-07
4	111	.1516E-08	.5920E-10	.1591E-07
4	113	.9371E-09	.3659E-10	.9835E-08
4	115	.5767E-09	.2252E-10	.6053E-08
4	117	.3536E-09	.1380E-10	.3711E-08
4	119	.2160E-09	.8434E-11	.2267E-08
4	121	.1315E-09	.5136E-11	.1381E-08
4	123	.7986E-10	.3118E-11	.8381E-09
4	125	.4834E-10	.1887E-11	.5074E-09
4	127	.2919E-10	.1140E-11	.3063E-09
4	129	.1758E-10	.6865E-12	.1845E-09
4	131	.1057E-10	.4126E-12	.1109E-09
4	133	.6339E-11	.2475E-12	.6653E-10
4	135	.3796E-11	.1482E-12	.3983E-10
4	137	.2269E-11	.8858E-13	.2381E-10
4	139	.1354E-11	.5287E-13	.1421E-10
4	141	.8070E-12	.3151E-13	.8470E-11
4	143	.4800E-12	.1874E-13	.5038E-11
4	145	.2849E-12	.1112E-13	.2990E-11
4	147	.1686E-12	.6582E-14	.1769E-11
4	149	.9940E-13	.3881E-14	.1043E-11
4	151	.5835E-13	.2278E-14	.6124E-12
4	153	.3408E-13	.1331E-14	.3577E-12
4	155	.1980E-13	.7729E-15	.2078E-12
4	157	.1143E-13	.4462E-15	.1199E-12
4	159	.6556E-14	.2560E-15	.6880E-13

PRZM Output Of Pesticide Concentration For Dicamba
Under Average Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT: DICAMBA
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR)   31 DEC., 69   CN: A

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.6459E-11	.1208E-11	.7103E-10
2	3	.1185E-09	.5986E-11	.1894E-08
2	5	.6740E-09	.3405E-10	.1078E-07
3	7	.4061E-08	.1601E-09	.5984E-07
3	9	.2593E-07	.7955E-09	.3567E-06
3	11	.1148E-06	.3523E-08	.1580E-05
3	13	.3942E-06	.1209E-07	.5423E-05
3	15	.1298E-05	.4440E-07	.1605E-04
4	17	.4586E-05	.1791E-06	.4813E-04
4	19	.1022E-04	.3989E-06	.1072E-03
4	21	.1825E-04	.7125E-06	.1915E-03
4	23	.2739E-04	.1069E-05	.2875E-03
4	25	.3570E-04	.1394E-05	.3746E-03
4	27	.4137E-04	.1615E-05	.4341E-03
4	29	.4340E-04	.1694E-05	.4555E-03
4	31	.4182E-04	.1633E-05	.4389E-03
4	33	.3743E-04	.1461E-05	.3929E-03
4	35	.3141E-04	.1226E-05	.3297E-03
4	37	.2491E-04	.9726E-06	.2615E-03
4	39	.1879E-04	.7336E-06	.1972E-03
4	41	.1355E-04	.5292E-06	.1422E-03
4	43	.9395E-05	.3668E-06	.9860E-04
4	45	.6284E-05	.2453E-06	.6595E-04
4	47	.4069E-05	.1589E-06	.4271E-04
4	49	.2560E-05	.9993E-07	.2686E-04
4	51	.1568E-05	.6121E-07	.1645E-04
4	53	.9373E-06	.3659E-07	.9837E-05
4	55	.5480E-06	.2139E-07	.5751E-05
4	57	.3139E-06	.1226E-07	.3294E-05
4	59	.1764E-06	.6889E-08	.1852E-05
4	61	.9747E-07	.3805E-08	.1023E-05
4	63	.5298E-07	.2069E-08	.5561E-06

PRZM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: A (Continue)

4	65	.2838E-07	.1108E-08	.2978E-06
4	67	.1499E-07	.5852E-09	.1573E-06
4	69	.7820E-08	.3053E-09	.8207E-07
4	71	.4032E-08	.1574E-09	.4232E-07
4	73	.2057E-08	.8031E-10	.2159E-07
4	75	.1039E-08	.4058E-10	.1091E-07
4	77	.5206E-09	.2032E-10	.5464E-08
4	79	.2587E-09	.1010E-10	.2715E-08
4	81	.1277E-09	.4984E-11	.1340E-08
4	83	.6261E-10	.2445E-11	.6571E-09
4	85	.3054E-10	.1192E-11	.3205E-09
4	87	.1482E-10	.5787E-12	.1556E-09
4	89	.7165E-11	.2798E-12	.7520E-10
4	91	.3451E-11	.1347E-12	.3622E-10
4	93	.1657E-11	.6470E-13	.1739E-10
4	95	.7938E-12	.3099E-13	.8331E-11
4	97	.3795E-12	.1481E-13	.3982E-11
4	99	.1811E-12	.7070E-14	.1900E-11
4	101	.8629E-13	.3369E-14	.9056E-12
4	103	.4107E-13	.1603E-14	.4310E-12
4	105	.1952E-13	.7623E-15	.2049E-12
4	107	.9272E-14	.3620E-15	.9732E-13
4	109	.4535E-14	.1770E-15	.4759E-13
4	111	.2254E-14	.8801E-16	.2366E-13
4	113	.1035E-14	.4040E-16	.1086E-13
4	115	.3992E-15	.1559E-16	.4190E-14
4	117	.1166E-15	.4553E-17	.1224E-14
4	119	.2375E-16	.9272E-18	.2493E-15
4	121	.3207E-17	.1252E-18	.3365E-16
4	123	.2742E-18	.1071E-19	.2878E-17
4	125	.0000	.0000	.0000
4	127	.0000	.0000	.0000
4	129	.0000	.0000	.0000
4	131	.0000	.0000	.0000
4	133	.0000	.0000	.0000
4	135	.0000	.0000	.0000
4	137	.0000	.0000	.0000
4	139	.0000	.0000	.0000
4	141	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: DICAMBA
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 69 CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.6459E-11	.1208E-11	.7103E-10
2	3	.1128E-09	.5699E-11	.1803E-08
2	5	.6369E-09	.3217E-10	.1018E-07
3	7	.3818E-08	.1505E-09	.5625E-07
3	9	.2430E-07	.7455E-09	.3343E-06
3	11	.1076E-06	.3300E-08	.1480E-05
3	13	.3699E-06	.1135E-07	.5088E-05
3	15	.1222E-05	.4179E-07	.1510E-04
4	17	.4341E-05	.1695E-06	.4556E-04
4	19	.9735E-05	.3801E-06	.1022E-03
4	21	.1751E-04	.6835E-06	.1837E-03
4	23	.2647E-04	.1033E-05	.2778E-03
4	25	.3476E-04	.1357E-05	.3648E-03
4	27	.4061E-04	.1585E-05	.4262E-03
4	29	.4296E-04	.1677E-05	.4509E-03
4	31	.4176E-04	.1630E-05	.4383E-03
4	33	.3772E-04	.1473E-05	.3959E-03
4	35	.3195E-04	.1248E-05	.3354E-03
4	37	.2559E-04	.9990E-06	.2686E-03
4	39	.1950E-04	.7611E-06	.2046E-03
4	41	.1421E-04	.5548E-06	.1491E-03
4	43	.9958E-05	.3888E-06	.1045E-03
4	45	.6735E-05	.2629E-06	.7068E-04
4	47	.4412E-05	.1723E-06	.4631E-04
4	49	.2809E-05	.1097E-06	.2948E-04
4	51	.1741E-05	.6799E-07	.1828E-04
4	53	.1054E-05	.4116E-07	.1107E-04
4	55	.6245E-06	.2438E-07	.6554E-05
4	57	.3626E-06	.1416E-07	.3805E-05
4	59	.2066E-06	.8067E-08	.2169E-05
4	61	.1158E-06	.4520E-08	.1215E-05

PRZM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: B (Continue)

4	63	.6386E-07	.2493E-08	.6702E-06
4	65	.3472E-07	.1355E-08	.3643E-06
4	67	.1862E-07	.7271E-09	.1955E-06
4	69	.9870E-08	.3853E-09	.1036E-06
4	71	.5173E-08	.2020E-09	.5429E-07
4	73	.2684E-08	.1048E-09	.2816E-07
4	75	.1379E-08	.5385E-10	.1448E-07
4	77	.7032E-09	.2745E-10	.7380E-08
4	79	.3558E-09	.1389E-10	.3735E-08
4	81	.1789E-09	.6984E-11	.1877E-08
4	83	.8941E-10	.3491E-11	.9384E-09
4	85	.4446E-10	.1736E-11	.4666E-09
4	87	.2201E-10	.8595E-12	.2310E-09
4	89	.1086E-10	.4239E-12	.1140E-09
4	91	.5338E-11	.2084E-12	.5603E-10
4	93	.2617E-11	.1022E-12	.2747E-10
4	95	.1281E-11	.4999E-13	.1344E-10
4	97	.6253E-12	.2441E-13	.6563E-11
4	99	.3049E-12	.1190E-13	.3200E-11
4	101	.1485E-12	.5798E-14	.1559E-11
4	103	.7226E-13	.2821E-14	.7583E-12
4	105	.3512E-13	.1371E-14	.3686E-12
4	107	.1706E-13	.6660E-15	.1790E-12
4	109	.8402E-14	.3280E-15	.8817E-13
4	111	.4281E-14	.1671E-15	.4493E-13
4	113	.2097E-14	.8189E-16	.2201E-13
4	115	.9020E-15	.3521E-16	.9466E-14
4	117	.3110E-15	.1214E-16	.3264E-14
4	119	.7753E-16	.3027E-17	.8137E-15
4	121	.1313E-16	.5127E-18	.1378E-15
4	123	.1481E-17	.5784E-19	.1555E-16
4	125	.7995E-19	.3123E-20	.8396E-18
4	127	.0000	.0000	.0000
4	129	.0000	.0000	.0000
4	131	.0000	.0000	.0000
4	133	.0000	.0000	.0000
4	135	.0000	.0000	.0000
4	137	.0000	.0000	.0000
4	139	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For Dicamba
Under Average Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: DICAMBA
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 69 CN: C

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.6459E-11	.1208E-11	.7103E-10
2	3	.1047E-09	.5287E-11	.1673E-08
2	5	.5856E-09	.2958E-10	.9361E-08
3	7	.3499E-08	.1380E-09	.5155E-07
3	9	.2228E-07	.6836E-09	.3065E-06
3	11	.9890E-07	.3034E-08	.1360E-05
3	13	.3413E-06	.1047E-07	.4695E-05
3	15	.1133E-05	.3875E-07	.1401E-04
4	17	.4057E-05	.1584E-06	.4258E-04
4	19	.9171E-05	.3581E-06	.9625E-04
4	21	.1663E-04	.6493E-06	.1745E-03
4	23	.2536E-04	.9902E-06	.2662E-03
4	25	.3361E-04	.1312E-05	.3527E-03
4	27	.3963E-04	.1547E-05	.4160E-03
4	29	.4235E-04	.1653E-05	.4445E-03
4	31	.4159E-04	.1624E-05	.4365E-03
4	33	.3797E-04	.1482E-05	.3985E-03
4	35	.3253E-04	.1270E-05	.3414E-03
4	37	.2636E-04	.1029E-05	.2766E-03
4	39	.2033E-04	.7936E-06	.2133E-03
4	41	.1501E-04	.5859E-06	.1575E-03
4	43	.1066E-04	.4161E-06	.1118E-03
4	45	.7309E-05	.2853E-06	.7670E-04
4	47	.4858E-05	.1897E-06	.5099E-04
4	49	.3139E-05	.1226E-06	.3295E-04
4	51	.1978E-05	.7721E-07	.2076E-04
4	53	.1217E-05	.4752E-07	.1278E-04
4	55	.7336E-06	.2864E-07	.7699E-05
4	57	.4337E-06	.1693E-07	.4551E-05
4	59	.2519E-06	.9834E-08	.2644E-05
4	61	.1440E-06	.5621E-08	.1511E-05

PRZM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: C (Continue)

4	63	.8109E-07	.3166E-08	.8510E-06
4	65	.4506E-07	.1759E-08	.4729E-06
4	67	.2474E-07	.9658E-09	.2596E-06
4	69	.1343E-07	.5244E-09	.1410E-06
4	71	.7220E-08	.2819E-09	.7577E-07
4	73	.3846E-08	.1502E-09	.4037E-07
4	75	.2033E-08	.7936E-10	.2133E-07
4	77	.1067E-08	.4165E-10	.1120E-07
4	79	.5563E-09	.2172E-10	.5838E-08
4	81	.2886E-09	.1127E-10	.3028E-08
4	83	.1490E-09	.5817E-11	.1564E-08
4	85	.7661E-10	.2991E-11	.8040E-09
4	87	.3926E-10	.1533E-11	.4121E-09
4	89	.2006E-10	.7833E-12	.2106E-09
4	91	.1023E-10	.3993E-12	.1073E-09
4	93	.5204E-11	.2032E-12	.5462E-10
4	95	.2644E-11	.1032E-12	.2774E-10
4	97	.1341E-11	.5236E-13	.1408E-10
4	99	.6798E-12	.2654E-13	.7134E-11
4	101	.3443E-12	.1344E-13	.3613E-11
4	103	.1742E-12	.6803E-14	.1829E-11
4	105	.8814E-13	.3441E-14	.9250E-12
4	107	.4456E-13	.1740E-14	.4677E-12
4	109	.2266E-13	.8845E-15	.2378E-12
4	111	.1195E-13	.4665E-15	.1254E-12
4	113	.6252E-14	.2441E-15	.6561E-13
4	115	.2987E-14	.1166E-15	.3135E-13
4	117	.1209E-14	.4720E-16	.1269E-13
4	119	.3782E-15	.1476E-16	.3969E-14
4	121	.8331E-16	.3253E-17	.8743E-15
4	123	.1227E-16	.4792E-18	.1288E-15
4	125	.1158E-17	.4521E-19	.1215E-16
4	127	.1954E-19	.8982E-21	.2415E-18
4	129	.0000	.0000	.0000
4	131	.0000	.0000	.0000
4	133	.0000	.0000	.0000
4	135	.0000	.0000	.0000
4	137	.0000	.0000	.0000
4	139	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For Dicamba
Under Low Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT: DICAMBA
LOW RAINFALL
DATE (DAY-MONTH-YEAR)   31 DEC., 54   CN: A

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.8450E-06	.2167E-06	.1275E-04
2	3	.4625E-05	.2336E-06	.7393E-04
2	5	.1274E-04	.6434E-06	.2036E-03
3	7	.2782E-04	.1097E-05	.4099E-03
3	9	.4656E-04	.1428E-05	.6404E-03
3	11	.5622E-04	.1725E-05	.7734E-03
3	13	.5658E-04	.1736E-05	.7783E-03
3	15	.5482E-04	.1875E-05	.6777E-03
4	17	.4686E-04	.1829E-05	.4918E-03
4	19	.3041E-04	.1187E-05	.3192E-03
4	21	.1813E-04	.7079E-06	.1903E-03
4	23	.1011E-04	.3945E-06	.1061E-03
4	25	.5354E-05	.2090E-06	.5619E-04
4	27	.2733E-05	.1067E-06	.2868E-04
4	29	.1345E-05	.5253E-07	.1412E-04
4	31	.6311E-06	.2464E-07	.6623E-05
4	33	.2781E-06	.1086E-07	.2919E-05
4	35	.1148E-06	.4483E-08	.1205E-05
4	37	.4480E-07	.1749E-08	.4702E-06
4	39	.1681E-07	.6564E-09	.1765E-06
4	41	.6233E-08	.2434E-09	.6542E-07
4	43	.2073E-08	.8092E-10	.2175E-07
4	45	.5489E-09	.2143E-10	.5761E-08
4	47	.1207E-09	.4711E-11	.1266E-08
4	49	.1967E-10	.7678E-12	.2064E-09
4	51	.1519E-12	.7323E-14	.1968E-11
4	53	.0000	.0000	.0000
4	55	.0000	.0000	.0000
4	57	.0000	.0000	.0000
4	59	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT : DICAMBA
LOW RAINFALL
DATE (DAY-MONTH-YEAR)   31 DEC., 54   CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.8450E-06	.2167E-06	.1275E-04
2	3	.4536E-05	.2291E-06	.7251E-04
2	5	.1245E-04	.6287E-06	.1990E-03
3	7	.2721E-04	.1073E-05	.4009E-03
3	9	.4572E-04	.1402E-05	.6289E-03
3	11	.5556E-04	.1704E-05	.7642E-03
3	13	.5634E-04	.1728E-05	.7750E-03
3	15	.5510E-04	.1884E-05	.6811E-03
4	17	.4769E-04	.1862E-05	.5005E-03
4	19	.3138E-04	.1225E-05	.3293E-03
4	21	.1898E-04	.7411E-06	.1992E-03
4	23	.1075E-04	.4195E-06	.1128E-03
4	25	.5786E-05	.2259E-06	.6073E-04
4	27	.3006E-05	.1173E-06	.3154E-04
4	29	.1509E-05	.5892E-07	.1584E-04
4	31	.7242E-06	.2827E-07	.7600E-05
4	33	.3270E-06	.1277E-07	.3432E-05
4	35	.1382E-06	.5397E-08	.1451E-05
4	37	.5511E-07	.2151E-08	.5784E-06
4	39	.2099E-07	.8196E-09	.2203E-06
4	41	.7934E-08	.3098E-09	.8327E-07
4	43	.2776E-08	.1084E-09	.2913E-07
4	45	.7896E-09	.3083E-10	.8287E-08
4	47	.1768E-09	.6904E-11	.1856E-08
4	49	.3556E-10	.1388E-11	.3732E-09
4	51	.1586E-11	.6614E-13	.1778E-10
4	53	.0000	.0000	.0000
4	55	.0000	.0000	.0000
4	57	.0000	.0000	.0000
4	59	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT : DICAMBA LOW RAINFALL

DATE (DAY-MONTH-YEAR) 31 DEC., 54 CN: C

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.8450E-06	.2167E-06	.1275E-04
1	2	.3676E-05	.5536E-06	.3744E-04
2	4	.7728E-05	.3904E-06	.1235E-03
2	6	.1778E-04	.8982E-06	.2843E-03
3	8	.3734E-04	.1145E-05	.5136E-03
3	10	.5116E-04	.1569E-05	.7038E-03
3	12	.5666E-04	.1738E-05	.7793E-03
3	14	.5381E-04	.1651E-05	.7402E-03
4	16	.5687E-04	.2220E-05	.5969E-03
4	18	.3970E-04	.1550E-05	.4166E-03
4	20	.2519E-04	.9837E-06	.2644E-03
4	22	.1485E-04	.5797E-06	.1558E-03
4	24	.8257E-05	.3224E-06	.8666E-04
4	26	.4404E-05	.1719E-06	.4622E-04
4	28	.2274E-05	.8877E-07	.2386E-04
4	30	.1131E-05	.4416E-07	.1187E-04
4	32	.5346E-06	.2087E-07	.5610E-05
4	34	.2371E-06	.9257E-08	.2489E-05
4	36	.9881E-07	.3858E-08	.1037E-05
4	38	.3909E-07	.1526E-08	.4103E-06
4	40	.1504E-07	.5873E-09	.1579E-06
4	42	.5710E-08	.2229E-09	.5992E-07
4	44	.1910E-08	.7456E-10	.2004E-07
4	46	.5035E-09	.1966E-10	.5284E-08
4	48	.1108E-09	.4325E-11	.1163E-08
4	49	.4935E-10	.1927E-11	.5179E-09
4	50	.1733E-10	.6767E-12	.1819E-09
4	51	.3699E-11	.1444E-12	.3882E-10
4	52	.5686E-13	.2807E-14	.7547E-12
4	53	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT : 2,4-D
HIGH RAINFALL
DATE (DAY-MONTH-YEAR)   31 DEC., 57   CN: A

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.8726E-15	.8544E-15	.2335E-15
1	2	.9467E-15	.9226E-15	.2899E-15
2	3	.2122E-15	.1951E-15	.2881E-15
2	4	.1969E-15	.1810E-15	.2673E-15
2	5	.1689E-15	.1553E-15	.2294E-15
2	6	.1336E-15	.1228E-15	.1814E-15
3	7	.8806E-16	.7907E-16	.1379E-15
3	8	.5635E-16	.4911E-16	.1027E-15
3	9	.3987E-16	.3475E-16	.7270E-16
3	10	.2684E-16	.2339E-16	.4893E-16
3	11	.1721E-16	.1500E-16	.3139E-16
3	12	.1055E-16	.9195E-17	.1924E-16
3	13	.6194E-17	.5398E-17	.1129E-16
3	14	.3492E-17	.3043E-17	.6367E-17
3	15	.2089E-17	.1846E-17	.3115E-17
4	16	.1094E-17	.9809E-18	.1232E-17
4	17	.4120E-18	.3695E-18	.4642E-18
4	18	.1485E-18	.1332E-18	.1673E-18
4	19	.5144E-19	.4613E-19	.5795E-19
4	20	.1718E-19	.1541E-19	.1936E-19
4	21	.5550E-20	.4977E-20	.6253E-20
4	22	.1739E-20	.1560E-20	.1960E-20
4	23	.5301E-21	.4754E-21	.5973E-21
4	24	.1575E-21	.1412E-21	.1774E-21
4	25	.4569E-22	.4097E-22	.5147E-22
4	26	.1297E-22	.1163E-22	.1461E-22
4	27	.3608E-23	.3236E-23	.4065E-23
4	28	.9852E-24	.8836E-24	.1110E-23
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000
4	31	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D
Under High Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT : 2,4-D
HIGH RAINFALL
DATE (DAY-MONTH-YEAR)   31 DEC., 57   CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.8726E-15	.8545E-15	.2335E-15
1	2	.9498E-15	.9256E-15	.2908E-15
2	3	.2133E-15	.1961E-15	.2897E-15
2	4	.1986E-15	.1826E-15	.2698E-15
2	5	.1714E-15	.1576E-15	.2327E-15
2	6	.1365E-15	.1255E-15	.1853E-15
3	7	.9067E-16	.8142E-16	.1420E-15
3	8	.5848E-16	.5096E-16	.1066E-15
3	9	.4173E-16	.3637E-16	.7609E-16
3	10	.2835E-16	.2471E-16	.5169E-16
3	11	.1837E-16	.1601E-16	.3349E-16
3	12	.1138E-16	.9917E-17	.2075E-16
3	13	.6756E-17	.5888E-17	.1232E-16
3	14	.3854E-17	.3359E-17	.7027E-17
3	15	.2337E-17	.2065E-17	.3485E-17
4	16	.1244E-17	.1115E-17	.1401E-17
4	17	.4763E-18	.4271E-18	.5366E-18
4	18	.1746E-18	.1566E-18	.1967E-18
4	19	.6153E-19	.5518E-19	.6933E-19
4	20	.2092E-19	.1876E-19	.2357E-19
4	21	.6883E-20	.6173E-20	.7755E-20
4	22	.2198E-20	.1971E-20	.2476E-20
4	23	.6828E-21	.6124E-21	.7693E-21
4	24	.2069E-21	.1855E-21	.2331E-21
4	25	.6124E-22	.5492E-22	.6900E-22
4	26	.1775E-22	.1592E-22	.1999E-22
4	27	.5042E-23	.4522E-23	.5681E-23
4	28	.1407E-23	.1262E-23	.1585E-23
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D
Under High Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT : 2,4-D
HIGH RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 57 CN: C

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.8726E-15	.8545E-15	.2335E-15
1	2	.9520E-15	.9277E-15	.2915E-15
2	3	.2143E-15	.1970E-15	.2910E-15
2	4	.2005E-15	.1844E-15	.2723E-15
2	5	.1743E-15	.1603E-15	.2367E-15
2	6	.1402E-15	.1289E-15	.1904E-15
3	7	.9412E-16	.8452E-16	.1474E-15
3	8	.6135E-16	.5347E-16	.1119E-15
3	9	.4431E-16	.3862E-16	.8078E-16
3	10	.3049E-16	.2657E-16	.5559E-16
3	11	.2003E-16	.1746E-16	.3653E-16
3	12	.1260E-16	.1098E-16	.2297E-16
3	13	.7598E-17	.6622E-17	.1385E-16
3	14	.4408E-17	.3841E-17	.8036E-17
3	15	.2726E-17	.2408E-17	.4065E-17
4	16	.1484E-17	.1331E-17	.1672E-17
4	17	.5823E-18	.5222E-18	.6561E-18
4	18	.2189E-18	.1963E-18	.2466E-18
4	19	.7914E-19	.7098E-19	.8917E-19
4	20	.2763E-19	.2478E-19	.3113E-19
4	21	.9347E-20	.8383E-20	.1053E-19
4	22	.3071E-20	.2755E-20	.3461E-20
4	23	.9830E-21	.8816E-21	.1108E-20
4	24	.3071E-21	.2754E-21	.3460E-21
4	25	.9384E-22	.8416E-22	.1057E-21
4	26	.2810E-22	.2520E-22	.3166E-22
4	27	.8262E-23	.7410E-23	.9309E-23
4	28	.2388E-23	.2142E-23	.2691E-23
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D
Under Average Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: 2,4-D
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 69 CN: A

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.1507E-14	.1477E-14	.4036E-15
1	2	.9421E-15	.9181E-15	.2885E-15
2	3	.1724E-15	.1585E-15	.2341E-15
2	4	.1229E-15	.1130E-15	.1668E-15
2	5	.7724E-16	.7101E-16	.1049E-15
2	6	.4330E-16	.3981E-16	.5880E-16
3	7	.2038E-16	.1830E-16	.3191E-16
3	8	.9437E-17	.8225E-17	.1721E-16
3	9	.4772E-17	.4159E-17	.8701E-17
3	10	.2276E-17	.1984E-17	.4150E-17
3	11	.1029E-17	.8970E-18	.1877E-17
3	12	.4435E-18	.3865E-18	.8086E-18
3	13	.1829E-18	.1594E-18	.3335E-18
3	14	.7250E-19	.6318E-19	.1322E-18
3	15	.2961E-19	.2616E-19	.4416E-19
4	16	.1025E-19	.9189E-20	.1154E-19
4	17	.2577E-20	.2311E-20	.2903E-20
4	18	.6262E-21	.5616E-21	.7056E-21
4	19	.1476E-21	.1324E-21	.1663E-21
4	20	.3383E-22	.3034E-22	.3812E-22
4	21	.7568E-23	.6788E-23	.8527E-23
4	22	.1656E-23	.1485E-23	.1865E-23
4	23	.0000	.0000	.0000
4	24	.0000	.0000	.0000
4	25	.0000	.0000	.0000
4	26	.0000	.0000	.0000
4	27	.0000	.0000	.0000
4	28	.0000	.0000	.0000
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D
Under Average Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT : 2,4-D
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 69 CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.1507E-14	.1477E-14	.4037E-15
1	2	.9467E-15	.9225E-15	.2898E-15
2	3	.1738E-15	.1598E-15	.2360E-15
2	4	.1244E-15	.1144E-15	.1690E-15
2	5	.7869E-16	.7234E-16	.1069E-15
2	6	.4442E-16	.4083E-16	.6032E-16
3	7	.2105E-16	.1890E-16	.3296E-16
3	8	.9817E-17	.8556E-17	.1790E-16
3	9	.5003E-17	.4360E-17	.9122E-17
3	10	.2406E-17	.2097E-17	.4386E-17
3	11	.1097E-17	.9565E-18	.2001E-17
3	12	.4773E-18	.4160E-18	.8702E-18
3	13	.1988E-18	.1732E-18	.3624E-18
3	14	.7960E-19	.6937E-19	.1451E-18
3	15	.3289E-19	.2906E-19	.4904E-19
4	16	.1153E-19	.1034E-19	.1299E-19
4	17	.2939E-20	.2636E-20	.3311E-20
4	18	.7242E-21	.6495E-21	.8160E-21
4	19	.1732E-21	.1553E-21	.1951E-21
4	20	.4030E-22	.3615E-22	.4541E-22
4	21	.9156E-23	.8212E-23	.1032E-22
4	22	.2036E-23	.1826E-23	.2294E-23
4	23	.0000	.0000	.0000
4	24	.0000	.0000	.0000
4	25	.0000	.0000	.0000
4	26	.0000	.0000	.0000
4	27	.0000	.0000	.0000
4	28	.0000	.0000	.0000
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D
Under Average Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT: 2,4-D
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR)   31 DEC., 69   CN: C

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.1507E-14	.1477E-14	.4037E-15
1	2	.9510E-15	.9267E-15	.2912E-15
2	3	.1752E-15	.1611E-15	.2380E-15
2	4	.1262E-15	.1160E-15	.1714E-15
2	5	.8039E-16	.7391E-16	.1092E-15
2	6	.4576E-16	.4207E-16	.6214E-16
3	7	.2188E-16	.1965E-16	.3426E-16
3	8	.1030E-16	.8973E-17	.1877E-16
3	9	.5298E-17	.4617E-17	.9659E-17
3	10	.2574E-17	.2244E-17	.4694E-17
3	11	.1188E-17	.1035E-17	.2165E-17
3	12	.5228E-18	.4556E-18	.9531E-18
3	13	.2205E-18	.1922E-18	.4020E-18
3	14	.8949E-19	.7799E-19	.1632E-18
3	15	.3755E-19	.3317E-19	.5599E-19
4	16	.1340E-19	.1201E-19	.1509E-19
4	17	.3479E-20	.3120E-20	.3920E-20
4	18	.8742E-21	.7841E-21	.9850E-21
4	19	.2134E-21	.1914E-21	.2404E-21
4	20	.5074E-22	.4551E-22	.5717E-22
4	21	.1179E-22	.1058E-22	.1329E-22
4	22	.2685E-23	.2408E-23	.3025E-23
4	23	.0000	.0000	.0000
4	24	.0000	.0000	.0000
4	25	.0000	.0000	.0000
4	26	.0000	.0000	.0000
4	27	.0000	.0000	.0000
4	28	.0000	.0000	.0000
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D Under Low Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT : 2,4-D
LOW RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 54 CN: A

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.2307E-14	.2276E-14	.6218E-15
1	2	.5538E-15	.5397E-15	.1696E-15
2	3	.5902E-16	.5426E-16	.8015E-16
2	4	.2283E-16	.2099E-16	.3100E-16
2	5	.7617E-17	.7002E-17	.1034E-16
2	6	.2276E-17	.2092E-17	.3090E-17
3	7	.5979E-18	.5369E-18	.9361E-18
3	8	.1622E-18	.1414E-18	.2958E-18
3	9	.4898E-19	.4269E-19	.8931E-19
3	10	.1426E-19	.1243E-19	.2600E-19
3	11	.4030E-20	.3512E-20	.7348E-20
3	12	.1112E-20	.9692E-21	.2028E-20
3	13	.3009E-21	.2622E-21	.5486E-21
3	14	.8011E-22	.6981E-22	.1461E-21
3	15	.2199E-22	.1943E-22	.3280E-22
4	16	.5115E-23	.4587E-23	.5762E-23
4	17	.8880E-24	.7964E-24	.1000E-23
4	18	.0000	.0000	.0000
4	19	.0000	.0000	.0000
4	20	.0000	.0000	.0000
4	21	.0000	.0000	.0000
4	22	.0000	.0000	.0000
4	23	.0000	.0000	.0000
4	24	.0000	.0000	.0000
4	25	.0000	.0000	.0000
4	26	.0000	.0000	.0000
4	27	.0000	.0000	.0000
4	28	.0000	.0000	.0000
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D
Under Low Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT : 2,4-D
LOW RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 54 CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.2307E-14	.2276E-14	.6218E-15
1	2	.5595E-15	.5452E-15	.1713E-15
2	3	.6012E-16	.5527E-16	.8164E-16
2	4	.2349E-16	.2160E-16	.3190E-16
2	5	.7932E-17	.7292E-17	.1077E-16
2	6	.2401E-17	.2208E-17	.3261E-17
3	7	.6398E-18	.5745E-18	.1002E-17
3	8	.1761E-18	.1535E-18	.3211E-18
3	9	.5400E-19	.4706E-19	.9846E-19
3	10	.1598E-19	.1393E-19	.2913E-19
3	11	.4594E-20	.4004E-20	.8376E-20
3	12	.1291E-20	.1125E-20	.2353E-20
3	13	.3557E-21	.3100E-21	.6486E-21
3	14	.9654E-22	.8414E-22	.1760E-21
3	15	.2706E-22	.2391E-22	.4036E-22
4	16	.6439E-23	.5774E-23	.7254E-23
4	17	.1144E-23	.1026E-23	.1289E-23
4	18	.0000	.0000	.0000
4	19	.0000	.0000	.0000
4	20	.0000	.0000	.0000
4	21	.0000	.0000	.0000
4	22	.0000	.0000	.0000
4	23	.0000	.0000	.0000
4	24	.0000	.0000	.0000
4	25	.0000	.0000	.0000
4	26	.0000	.0000	.0000
4	27	.0000	.0000	.0000
4	28	.0000	.0000	.0000
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For 2,4-D
Under Low Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: 2,4-D
LOW RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 54 CN: C

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.2307E-14	.2276E-14	.6219E-15
1	2	.5629E-15	.5485E-15	.1723E-15
2	3	.6079E-16	.5589E-16	.8256E-16
2	4	.2391E-16	.2198E-16	.3246E-16
2	5	.8129E-17	.7473E-17	.1104E-16
2	6	.2480E-17	.2280E-17	.3368E-17
3	7	.6661E-18	.5981E-18	.1043E-17
3	8	.1848E-18	.1611E-18	.3370E-18
3	9	.5715E-19	.4981E-19	.1042E-18
3	10	.1706E-19	.1487E-19	.3110E-19
3	11	.4949E-20	.4313E-20	.9024E-20
3	12	.1403E-20	.1223E-20	.2558E-20
3	13	.3904E-21	.3403E-21	.7119E-21
3	14	.1070E-21	.9323E-22	.1950E-21
3	15	.3029E-22	.2676E-22	.4517E-22
4	16	.7286E-23	.6534E-23	.8209E-23
4	17	.1309E-23	.1174E-23	.1475E-23
4	18	.0000	.0000	.0000
4	19	.0000	.0000	.0000
4	20	.0000	.0000	.0000
4	21	.0000	.0000	.0000
4	22	.0000	.0000	.0000
4	23	.0000	.0000	.0000
4	24	.0000	.0000	.0000
4	25	.0000	.0000	.0000
4	26	.0000	.0000	.0000
4	27	.0000	.0000	.0000
4	28	.0000	.0000	.0000
4	29	.0000	.0000	.0000
4	30	.0000	.0000	.0000

PRZM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: ATRAZINE
HIGH RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 57 CN: A

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.3911E-03	.3730E-03	.2331E-03
1	2	.9609E-03	.9066E-03	.6520E-03
2	3	.2677E-03	.2222E-03	.7663E-03
2	5	.3510E-03	.2913E-03	.1004E-02
3	7	.3727E-03	.2952E-03	.1188E-02
3	9	.3535E-03	.2647E-03	.1260E-02
3	10	.3517E-03	.2633E-03	.1254E-02
3	11	.3413E-03	.2555E-03	.1217E-02
3	12	.3228E-03	.2417E-03	.1151E-02
3	13	.2975E-03	.2227E-03	.1061E-02
3	14	.2671E-03	.2000E-03	.9522E-03
4	17	.1992E-03	.1577E-03	.4532E-03
4	19	.9342E-04	.7396E-04	.2125E-03
4	20	.6032E-04	.4775E-04	.1372E-03
4	21	.3760E-04	.2976E-04	.8553E-04
4	23	.1328E-04	.1051E-04	.3020E-04
4	25	.4190E-05	.3317E-05	.9532E-05
4	27	.1200E-05	.9501E-06	.2730E-05
4	29	.3159E-06	.2501E-06	.7187E-06
4	31	.7726E-07	.6116E-07	.1758E-06
4	33	.1771E-07	.1402E-07	.4030E-07
4	35	.3838E-08	.3038E-08	.8730E-08
4	39	.1560E-09	.1235E-09	.3549E-09
4	41	.2960E-10	.2344E-10	.6735E-10
4	43	.5429E-11	.4298E-11	.1235E-10
4	45	.9659E-12	.7647E-12	.2197E-11
4	51	.4698E-14	.3720E-14	.1069E-13
4	53	.7653E-15	.6059E-15	.1741E-14
4	55	.1227E-15	.9716E-16	.2792E-15
4	57	.1941E-16	.1537E-16	.4416E-16
4	59	.3035E-17	.2403E-17	.6904E-17

PRZM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT : ATRAZINE
HIGH RAINFALL
DATE (DAY-MONTH-YEAR)   31 DEC., 57   CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.3911E-03	.3730E-03	.2331E-03
1	2	.9516E-03	.8977E-03	.6457E-03
2	3	.2649E-03	.2199E-03	.7582E-03
2	4	.3063E-03	.2542E-03	.8767E-03
2	5	.3473E-03	.2882E-03	.9939E-03
2	6	.3845E-03	.3191E-03	.1100E-02
3	7	.3700E-03	.2931E-03	.1180E-02
3	8	.3454E-03	.2586E-03	.1232E-02
3	9	.3529E-03	.2642E-03	.1258E-02
3	10	.3524E-03	.2638E-03	.1256E-02
3	11	.3434E-03	.2571E-03	.1225E-02
3	12	.3265E-03	.2445E-03	.1164E-02
3	13	.3026E-03	.2265E-03	.1079E-02
3	14	.2733E-03	.2047E-03	.9745E-03
3	15	.2814E-03	.2163E-03	.8329E-03
4	17	.2100E-03	.1663E-03	.4779E-03
4	19	.1009E-03	.7985E-04	.2295E-03
4	21	.4163E-04	.3296E-04	.9470E-04
4	23	.1510E-04	.1195E-04	.3434E-04
4	25	.4900E-05	.3879E-05	.1115E-04
4	27	.1445E-05	.1144E-05	.3288E-05
4	29	.3923E-06	.3106E-06	.8925E-06
4	31	.9906E-07	.7842E-07	.2254E-06
4	35	.5266E-08	.4169E-08	.1198E-07
4	39	.2304E-09	.1824E-09	.5241E-09
4	43	.8671E-11	.6865E-11	.1973E-10
4	47	.2908E-12	.2302E-12	.6615E-12
4	51	.8924E-14	.7065E-14	.2030E-13
4	53	.1523E-14	.1206E-14	.3465E-14
4	55	.2561E-15	.2028E-15	.5827E-15
4	57	.4255E-16	.3368E-16	.9680E-16

PRZM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: ATRAZINE
HIGH RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 57 CN: C

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.3911E-03	.3730E-03	.2332E-03
1	2	.9348E-03	.8819E-03	.6343E-03
2	3	.2598E-03	.2156E-03	.7435E-03
2	4	.3001E-03	.2491E-03	.8590E-03
2	5	.3404E-03	.2826E-03	.9743E-03
2	6	.3775E-03	.3134E-03	.1081E-02
3	7	.3643E-03	.2885E-03	.1162E-02
3	8	.3412E-03	.2555E-03	.1217E-02
3	9	.3502E-03	.2622E-03	.1248E-02
3	11	.3447E-03	.2581E-03	.1229E-02
3	13	.3081E-03	.2307E-03	.1099E-02
3	15	.2922E-03	.2246E-03	.8648E-03
4	17	.2248E-03	.1779E-03	.5113E-03
4	19	.1115E-03	.8830E-04	.2537E-03
4	21	.4770E-04	.3776E-04	.1085E-03
4	23	.1797E-04	.1422E-04	.4088E-04
4	25	.6073E-05	.4808E-05	.1382E-04
4	27	.1870E-05	.1480E-05	.4254E-05
4	29	.5313E-06	.4206E-06	.1209E-05
4	31	.1408E-06	.1115E-06	.3203E-06
4	33	.3513E-07	.2781E-07	.7991E-07
4	35	.8316E-08	.6584E-08	.1892E-07
4	37	.1881E-08	.1489E-08	.4280E-08
4	39	.4091E-09	.3239E-09	.9308E-09
4	41	.8599E-10	.6807E-10	.1956E-09
4	43	.1754E-10	.1389E-10	.3991E-10
4	45	.3489E-11	.2763E-11	.7938E-11
4	47	.6790E-12	.5376E-12	.1545E-11
4	49	.1297E-12	.1027E-12	.2950E-12
4	51	.2437E-13	.1929E-13	.5544E-13
4	53	.4519E-14	.3577E-14	.1028E-13
4	55	.8283E-15	.6557E-15	.1884E-14

PRZM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: ATRAZINE
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 69 CN: A.

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.1405E-02	.1343E-02	.8395E-03
1	2	.1977E-02	.1865E-02	.1342E-02
2	3	.4986E-03	.4139E-03	.1427E-02
2	4	.5069E-03	.4207E-03	.1451E-02
2	5	.4890E-03	.4059E-03	.1400E-02
2	6	.4457E-03	.3699E-03	.1276E-02
3	7	.3500E-03	.2772E-03	.1116E-02
3	8	.2660E-03	.1992E-03	.9484E-03
3	9	.2168E-03	.1623E-03	.7730E-03
3	10	.1696E-03	.1270E-03	.6049E-03
3	11	.1276E-03	.9557E-04	.4551E-03
3	12	.9250E-04	.6926E-04	.3298E-03
3	14	.4378E-04	.3278E-04	.1561E-03
4	16	.2161E-04	.1711E-04	.4916E-04
4	18	.5105E-05	.4042E-05	.1161E-04
4	20	.1051E-05	.8318E-06	.2390E-05
4	22	.1932E-06	.1530E-06	.4396E-06
4	24	.3240E-07	.2565E-07	.7372E-07
4	26	.5032E-08	.3984E-08	.1145E-07
4	28	.7329E-09	.5803E-09	.1667E-08
4	30	.1012E-09	.8009E-10	.2301E-09
4	32	.1335E-10	.1057E-10	.3036E-10
4	34	.1695E-11	.1342E-11	.3857E-11
4	36	.2085E-12	.1651E-12	.4744E-12
4	38	.2497E-13	.1977E-13	.5681E-13
4	40	.2923E-14	.2314E-14	.6649E-14
4	42	.3357E-15	.2658E-15	.7637E-15
4	44	.3794E-16	.3004E-16	.8631E-16
4	46	.4231E-17	.3350E-17	.9626E-17
4	48	.4666E-18	.3694E-18	.1062E-17
4	50	.5100E-19	.4038E-19	.1160E-18
4	52	.5532E-20	.4380E-20	.1259E-19

PRZM Output Of Pesticide Concentration For Atrazine
Under Average Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: ATRAZINE
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR) 31 DEC., 69 CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.1401E-02	.1339E-02	.8368E-03
1	2	.1974E-02	.1862E-02	.1339E-02
2	3	.4983E-03	.4136E-03	.1426E-02
2	4	.5077E-03	.4214E-03	.1453E-02
2	5	.4914E-03	.4078E-03	.1406E-02
2	6	.4497E-03	.3733E-03	.1287E-02
3	7	.3548E-03	.2810E-03	.1131E-02
3	8	.2709E-03	.2028E-03	.9659E-03
3	9	.2220E-03	.1662E-03	.7915E-03
3	10	.1747E-03	.1308E-03	.6230E-03
3	12	.9654E-04	.7228E-04	.3442E-03
3	14	.4636E-04	.3472E-04	.1653E-03
4	16	.2334E-04	.1847E-04	.5309E-04
4	18	.5637E-05	.4463E-05	.1282E-04
4	20	.1188E-05	.9403E-06	.2702E-05
4	22	.2239E-06	.1773E-06	.5094E-06
4	24	.3853E-07	.3051E-07	.8766E-07
4	26	.6149E-08	.4868E-08	.1399E-07
4	28	.9216E-09	.7296E-09	.2097E-08
4	30	.1311E-09	.1038E-09	.2982E-09
4	32	.1784E-10	.1413E-10	.4059E-10
4	34	.2342E-11	.1854E-11	.5328E-11
4	36	.2981E-12	.2360E-12	.6783E-12
4	38	.3700E-13	.2929E-13	.8417E-13
4	40	.4495E-14	.3559E-14	.1023E-13
4	42	.5365E-15	.4247E-15	.1221E-14
4	44	.6310E-16	.4996E-16	.1436E-15
4	46	.7333E-17	.5805E-17	.1668E-16
4	48	.8437E-18	.6680E-18	.1919E-17
4	50	.9631E-19	.7625E-19	.2191E-18
4	51	.3246E-19	.2570E-19	.7384E-19
4	53	.3672E-20	.2907E-20	.8353E-20

PRZM Output Of Pesticide Concentration For Atrazine
Under Average Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT: ATRAZINE
AVERAGE RAINFALL
DATE (DAY-MONTH-YEAR)   31 DEC., 69   CN: C

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.1401E-02	.1339E-02	.8368E-03
1	2	.1967E-02	.1856E-02	.1335E-02
2	3	.4969E-03	.4125E-03	.1422E-02
2	4	.5072E-03	.4210E-03	.1452E-02
2	5	.4924E-03	.4087E-03	.1409E-02
2	6	.4526E-03	.3756E-03	.1295E-02
3	7	.3587E-03	.2841E-03	.1144E-02
3	8	.2752E-03	.2061E-03	.9812E-03
3	9	.2268E-03	.1698E-03	.8085E-03
3	10	.1796E-03	.1345E-03	.6402E-03
3	12	.1006E-03	.7532E-04	.3586E-03
3	14	.4909E-04	.3675E-04	.1750E-03
4	16	.2525E-04	.1999E-04	.5745E-04
4	18	.6261E-05	.4957E-05	.1424E-04
4	20	.1357E-05	.1074E-05	.3088E-05
4	22	.2639E-06	.2089E-06	.6004E-06
4	24	.4698E-07	.3719E-07	.1069E-06
4	26	.7777E-08	.6157E-08	.1769E-07
4	28	.1213E-08	.9604E-09	.2760E-08
4	30	.1801E-09	.1426E-09	.4098E-09
4	32	.2570E-10	.2035E-10	.5846E-10
4	34	.3547E-11	.2808E-11	.8069E-11
4	36	.4766E-12	.3773E-12	.1084E-11
4	38	.6266E-13	.4960E-13	.1425E-12
4	40	.8094E-14	.6408E-14	.1841E-13
4	42	.1031E-14	.8163E-15	.2346E-14
4	44	.1299E-15	.1028E-15	.2955E-15
4	46	.1622E-16	.1284E-16	.3690E-16
4	48	.2012E-17	.1593E-17	.4577E-17
4	50	.2483E-18	.1966E-18	.5648E-18
4	52	.3052E-19	.2416E-19	.6944E-19
4	54	.3742E-20	.2962E-20	.8512E-20
4	56	.4577E-21	.3624E-21	.1041E-20

PRZM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: A

1PESTICIDE CONCENTRATION PROFILE PRZM OUTPUT: LOW RAINFALL ATRAZINE

DATE (DAY-MONTH-YEAR) 31 DEC., 54 CN: A

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.3844E-02	.3729E-02	.2331E-02
1	2	.2107E-02	.1988E-02	.1430E-02
2	3	.3807E-03	.3160E-03	.1090E-02
2	4	.2555E-03	.2121E-03	.7314E-03
2	5	.1539E-03	.1278E-03	.4406E-03
2	6	.8482E-04	.7040E-04	.2428E-03
3	7	.4102E-04	.3249E-04	.1308E-03
3	8	.1972E-04	.1477E-04	.7031E-04
3	9	.1017E-04	.7614E-05	.3626E-04
3	10	.5065E-05	.3793E-05	.1806E-04
3	11	.2451E-05	.1835E-05	.8738E-05
3	12	.1157E-05	.8665E-06	.4126E-05
3	13	.5353E-06	.4008E-06	.1909E-05
3	14	.2434E-06	.1822E-06	.8678E-06
3	15	.1175E-06	.9035E-07	.3479E-06
4	16	.5072E-07	.4016E-07	.1154E-06
4	17	.1657E-07	.1312E-07	.3770E-07
4	18	.5343E-08	.4230E-08	.1216E-07
4	19	.1704E-08	.1349E-08	.3876E-08
4	20	.5379E-09	.4259E-09	.1224E-08
4	21	.1685E-09	.1334E-09	.3833E-09
4	22	.5242E-10	.4150E-10	.1193E-09
4	23	.1623E-10	.1285E-10	.3693E-10
4	24	.5007E-11	.3964E-11	.1139E-10
4	25	.1535E-11	.1215E-11	.3493E-11
4	26	.4655E-12	.3685E-12	.1059E-11
4	27	.1386E-12	.1097E-12	.3153E-12
4	28	.4026E-13	.3187E-13	.9159E-13
4	29	.1135E-13	.8988E-14	.2583E-13
4	30	.3102E-14	.2456E-14	.7056E-14
4	31	.8216E-15	.6505E-15	.1869E-14
4	32	.2116E-15	.1675E-15	.4815E-15
4	33	.5323E-16	.4215E-16	.1211E-15
4	34	.1314E-16	.1040E-16	.2989E-16

PRZM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: B

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT : ATRAZINE, LOW RAINFALL CN: B

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.3844E-02	.3729E-02	.2331E-02
1	2	.2123E-02	.2003E-02	.1440E-02
2	3	.3853E-03	.3198E-03	.1103E-02
2	4	.2603E-03	.2160E-03	.7449E-03
2	5	.1580E-03	.1312E-03	.4523E-03
2	6	.8786E-04	.7292E-04	.2515E-03
3	7	.4290E-04	.3398E-04	.1368E-03
3	8	.2083E-04	.1560E-04	.7427E-04
3	9	.1086E-04	.8130E-05	.3871E-04
3	10	.5471E-05	.4096E-05	.1951E-04
3	11	.2679E-05	.2006E-05	.9553E-05
3	12	.1281E-05	.9594E-06	.4569E-05
3	13	.6007E-06	.4498E-06	.2142E-05
3	14	.2769E-06	.2074E-06	.9874E-06
3	15	.1358E-06	.1044E-06	.4021E-06
4	16	.5967E-07	.4724E-07	.1358E-06
4	17	.1985E-07	.1572E-07	.4517E-07
4	18	.6523E-08	.5165E-08	.1484E-07
4	19	.2120E-08	.1679E-08	.4824E-08
4	20	.6830E-09	.5407E-09	.1554E-08
4	21	.2183E-09	.1728E-09	.4967E-09
4	22	.6935E-10	.5490E-10	.1578E-09
4	23	.2193E-10	.1736E-10	.4989E-10
4	24	.6911E-11	.5472E-11	.1572E-10
4	25	.2167E-11	.1716E-11	.4931E-11
4	26	.6729E-12	.5327E-12	.1531E-11
4	27	.2053E-12	.1626E-12	.4671E-12
4	28	.6116E-13	.4842E-13	.1391E-12
4	29	.1769E-13	.1400E-13	.4023E-13
4	30	.4952E-14	.3920E-14	.1127E-13
4	31	.1343E-14	.1063E-14	.3054E-14
4	32	.3534E-15	.2798E-15	.8040E-15
4	33	.9067E-16	.7178E-16	.2063E-15
4	34	.2279E-16	.1804E-16	.5184E-16
4	35	.5633E-17	.4460E-17	.1282E-16

PRZM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: C

1PESTICIDE CONCENTRATION PROFILE   PRZM OUTPUT : ATRAZINE, CN: C
LOW RAINFALL

HORIZON	COMPARTMENT	TOTAL (MG/KG)	ADSORBED (MG/KG)	DISSOLVED (MG/L)
1	1	.3844E-02	.3729E-02	.2331E-02
1	2	.2132E-02	.2011E-02	.1446E-02
2	3	.3879E-03	.3220E-03	.1110E-02
2	4	.2631E-03	.2184E-03	.7530E-03
2	5	.1605E-03	.1332E-03	.4594E-03
2	6	.8973E-04	.7448E-04	.2568E-03
3	7	.4407E-04	.3491E-04	.1405E-03
3	8	.2152E-04	.1611E-04	.7673E-04
3	9	.1129E-04	.8451E-05	.4024E-04
3	10	.5724E-05	.4286E-05	.2041E-04
3	11	.2822E-05	.2113E-05	.1006E-04
3	12	.1359E-05	.1018E-05	.4846E-05
3	13	.6418E-06	.4805E-06	.2288E-05
3	14	.2980E-06	.2231E-06	.1063E-05
3	15	.1473E-06	.1133E-06	.4361E-06
4	16	.6532E-07	.5171E-07	.1486E-06
4	17	.2193E-07	.1736E-07	.4990E-07
4	18	.7273E-08	.5758E-08	.1655E-07
4	19	.2387E-08	.1889E-08	.5429E-08
4	20	.7761E-09	.6144E-09	.1766E-08
4	21	.2505E-09	.1983E-09	.5698E-09
4	22	.8034E-10	.6361E-10	.1828E-09
4	23	.2565E-10	.2031E-10	.5836E-10
4	24	.8164E-11	.6464E-11	.1857E-10
4	25	.2586E-11	.2048E-11	.5884E-11
4	26	.8115E-12	.6425E-12	.1846E-11
4	27	.2505E-12	.1983E-12	.5699E-12
4	28	.7555E-13	.5981E-13	.1719E-12
4	29	.2214E-13	.1753E-13	.5038E-13
4	30	.6291E-14	.4981E-14	.1431E-13
4	31	.1732E-14	.1371E-14	.3941E-14
4	32	.4634E-15	.3669E-15	.1054E-14
4	33	.1209E-15	.9573E-16	.2751E-15
4	34	.3092E-16	.2448E-16	.7035E-16
4	35	.7784E-17	.6163E-17	.1771E-16

APPENDIX F

PRZM+FEM OUTPUT OF PESTICIDE CONCENTRATION

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: A

```
***************************************************************************
*                                                                         *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                            *
*                                                                         *
*    SUMA143    data source: PRZM OUTPUT                                  *
*               TMAX:  330                                                *
*               DICAMBA, HIGH RAINFALL, CN: A                             *
*                                                                         *
***************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES.......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..........................(RAINFALL CODE)..........   1
KDRAIN.........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3...............(WRITE MATERIAL PROPERTIES)..........   4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0

*********************************************************************************************
```

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	329.8582	7916.5965	0.4750E+06	0.5000E+00	787	1	2101

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-334.00	1.00	-330.04	-326.47	0.0685	0.0690	0.0695	-0.10261E-08	0.00000E+00
2	12.5	-323.23	0.74	-320.26	-317.52	0.0700	0.0705	0.0709	-0.55817E-09	0.82505E-10
3	25.0	-314.95	0.60	-312.51	-310.17	0.0713	0.0717	0.0721	0.23133E-09	0.99373E-10
4	37.5	-307.89	0.54	-305.65	-303.44	0.0725	0.0729	0.0733	0.12582E-08	0.96477E-10
5	50.0	-301.26	0.52	-298.59	-295.19	0.0737	0.0900	0.1203	0.12621E-08	-0.85759E-10
6	62.5	-291.48	0.89	-287.76	-284.03	0.1375	0.1388	0.1401	-0.12360E-09	0.55440E-10
7	75.0	-280.30	0.89	-276.57	-272.83	0.1414	0.1428	0.1443	0.23387E-08	0.69503E-09
8	87.5	-269.09	0.90	-265.35	-261.60	0.1457	0.1473	0.1489	0.51844E-08	0.44653E-09
9	100.0	-257.84	0.90	-250.30	-242.72	0.1505	0.1539	0.1576	-0.56636E-08	0.14495E-08
10	125.0	-235.13	0.91	-227.46	-219.72	0.1615	0.1657	0.1703	-0.56686E-08	0.63175E-09
11	150.0	-212.06	0.91	-204.18	-196.92	0.1751	0.1763	0.1739	0.71100E-08	-0.40606E-10
12	175.0	-192.16	0.35	-189.73	-187.88	0.1736	0.1757	0.1773	-0.26960E-07	-0.23522E-08
13	200.0	-186.14	0.22	-184.40	-182.83	0.1788	0.1804	0.1818	-0.86875E-07	-0.57414E-08

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: A (Continue)

14	225.0	-181.35	0.17	-179.94	-178.63	0.1832	0.1846	0.1858	0.13868E-06	0.78593E-08
15	250.0	-177.39	0.14	-176.22	-175.12	0.1871	0.1882	0.1893	-0.14295E-06	0.64854E-08
16	275.0	-174.08	0.12	-173.10	-172.17	0.1904	0.1914	0.1924	-0.29650E-06	-0.48290E-07
17	300.0	-171.30	0.10	-170.47	-169.69	0.1933	0.1942	0.1950	-0.25962E-06	0.64042E-07
18	325.0	-168.95	0.09	-168.25	-167.59	0.1958	0.1966	0.1973	0.55742E-06	0.26292E-07
19	350.0	-166.96	0.07	-166.37	-165.80	0.1980	0.1986	0.1993	0.15434E-05	-0.32984E-07
20	375.0	-165.27	0.06	-164.76	-164.27	0.1999	0.2005	0.2010	0.17288E-05	0.19832E-06
21	400.0	-163.81	0.05	-163.37	-162.94	0.2015	0.2021	0.2025	0.97021E-05	0.54490E-06
22	425.0	-162.54	0.05	-162.15	-161.77	0.2030	0.2035	0.2039	0.66960E-04	0.48899E-05
23	450.0	-161.41	0.04	-161.06	-160.72	0.2043	0.2048	0.2052	0.33943E-03	0.18284E-04
24	475.0	-160.39	0.04	-160.07	-159.75	0.2056	0.2059	0.2063	0.84351E-03	0.14884E-04
25	500.0	-159.45	0.04	-159.15	-158.85	0.2067	0.2071	0.2074	0.72842E-03	-0.22351E-04
26	525.0	-158.57	0.03	-158.28	-158.01	0.2078	0.2081	0.2084	0.18275E-03	-0.15017E-04
27	550.0	-157.73	0.03	-157.47	-157.21	0.2088	0.2091	0.2094	0.12439E-04	-0.13366E-05
28	575.0	-156.95	0.03	-156.70	-156.45	0.2097	0.2101	0.2104	0.58576E-06	-0.12104E-06
29	600.0	-156.21	0.03	-155.97	-155.74	0.2107	0.2110	0.2113	0.11406E-07	0.68245E-08
30	625.0	-155.51	0.03	-155.29	-155.08	0.2115	0.2118	0.2121	-0.12367E-07	-0.77042E-09
31	650.0	-154.87	0.02	-154.67	-154.48	0.2123	0.2126	0.2128	0.42666E-08	-0.46973E-09
32	675.0	-154.30	0.02	-154.12	-153.95	0.2131	0.2133	0.2135	-0.98113E-09	0.25404E-09
33	700.0	-153.79	0.02	-153.64	-153.49	0.2137	0.2139	0.2141	0.76585E-11	-0.58027E-10
34	725.0	-153.36	0.02	-153.24	-153.13	0.2143	0.2144	0.2146	0.68223E-10	0.46855E-12
35	750.0	-153.03	0.01	-152.94	-152.86	0.2147	0.2148	0.2149	-0.21752E-10	0.44376E-11
36	775.0	-152.80	0.01	-152.76	-152.72	0.2150	0.2151	0.2151	0.18361E-11	-0.12871E-11
37	800.0	-152.71	0.00	-152.71	-152.73	0.2151	0.2151	0.2151	0.13037E-11	-0.26940E-13
38	825.0	-152.77	-0.01	-152.83	-152.91	0.2151	0.2150	0.2149	-0.31987E-12	0.89560E-13
39	850.0	-153.03	-0.02	-153.17	-153.35	0.2147	0.2145	0.2143	-0.17278E-13	-0.12557E-13
40	875.0	-153.57	-0.03	-153.83	-154.14	0.2140	0.2137	0.2133	0.19305E-13	-0.38847E-14
41	900.0	-154.51	-0.05	-154.95	-155.48	0.2128	0.2123	0.2116	-0.16524E-15	0.76485E-15
42	925.0	-156.10	-0.08	-156.85	-157.73	0.2108	0.2099	0.2088	-0.84483E-15	0.21230E-15
43	950.0	-158.80	-0.14	-160.08	-161.64	0.2075	0.2059	0.2041	-0.54010E-16	-0.15788E-16
44	975.0	-163.54	-0.25	-165.86	-168.75	0.2019	0.1992	0.1960	0.28204E-16	-0.12358E-16
45	1000.0	-172.38	-0.49	-176.97	-182.94	0.1921	0.1875	0.1817	0.74397E-17	-0.20166E-17
46	1025.0	-190.83	-1.08	-201.56	-216.88	0.1747	0.1662	0.1556	0.65387E-18	-0.32878E-19
47	1050.0	-238.58	-3.06	-271.84	-308.57	0.1434	0.1294	0.1184	-0.83319E-19	0.64205E-19
48	1075.0	-330.68	-1.05	-335.81	-336.33	0.1134	0.1123	0.1122	-0.44704E-19	0.23724E-19
49	1100.0	-336.25	-0.12	-336.67	-336.49	0.1122	0.1122	0.1122	-0.14116E-19	0.72658E-20
50	1125.0	-336.44	-0.03	-336.56	-336.52	0.1122	0.1122	0.1122	-0.42674E-20	0.21822E-20
51	1150.0	-336.51	-0.01	-336.56	-336.56	0.1122	0.1122	0.1122	-0.12788E-20	0.65084E-21
52	1175.0	-336.58	-0.01	-336.62	-336.67	0.1122	0.1122	0.1122	-0.38078E-21	0.19301E-21
53	1200.0	-336.72	-0.01	-336.80	-336.90	0.1122	0.1121	0.1121	-0.11276E-21	0.56951E-22
54	1225.0	-337.03	-0.02	-337.20	-337.41	0.1121	0.1121	0.1120	-0.33230E-22	0.16729E-22
55	1250.0	-337.68	-0.04	-338.01	-338.42	0.1120	0.1119	0.1118	-0.97551E-23	0.48923E-23
56	1275.0	-338.93	-0.07	-339.56	-340.33	0.1117	0.1116	0.1115	-0.28697E-23	0.14176E-23
57	1300.0	-341.26	-0.12	-342.33	-341.66	0.1113	0.1111	0.1112	-0.90054E-24	0.38047E-24
58	1325.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................. 0.000 MOISTURE ADDED TO PROFILE............ 88.229

DRAINAGE RATE.................... 0.000 MOISTURE INCREASE IN PROFILE......... 87.881

**********NORMAL TERMINATION AT TIME = 330.35819 DAYS AND STEP NUMBER = 788

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: B

```
*************************************************************************
*                                                                       *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                          *
*                                                                       *
*    SUMAT43     data source: PRZM OUTPUT                               *
*                TMAX:  320                                             *
*                DICAMBA,  HIGH RAINFALL,  CN: B                        *
*                                                                       *
*************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP..................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..........................(RAINFALL CODE)..........    1
KDRAIN.........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

****************************************************************************************

ELAPSED TIME   DAYS      HOURS       MINUTES      DELT                      ISTEP   NIT  NITT
             329.8954 7917.4887   0.4750E+06   0.5000E+00                  789     1  2114
```

		PRESSURE HEAD				MOISTURE CONTENT			CONCENTRATION	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-334.07	1.00	-330.10	-326.54	0.0685	0.0690	0.0695	-0.26132E-09	0.00000E+00
2	12.5	-323.29	0.75	-320.31	-317.56	0.0700	0.0705	0.0709	-0.58343E-09	0.88642E-12
3	25.0	-314.99	0.60	-312.54	-310.19	0.0713	0.0717	0.0721	-0.22791E-09	0.76628E-10
4	37.5	-307.92	0.54	-305.67	-303.45	0.0725	0.0729	0.0733	0.81819E-09	0.11544E-09
5	50.0	-301.27	0.52	-298.61	-295.20	0.0737	0.0900	0.1203	0.12332E-08	-0.19441E-10
6	62.5	-291.49	0.89	-287.77	-284.04	0.1375	0.1387	0.1401	0.28908E-09	-0.10267E-11
7	75.0	-280.31	0.89	-276.58	-272.85	0.1414	0.1428	0.1443	0.19542E-08	0.59154E-09
8	87.5	-269.11	0.90	-265.36	-261.61	0.1457	0.1473	0.1488	0.68634E-08	0.51529E-09
9	100.0	-257.86	0.90	-250.32	-242.74	0.1505	0.1539	0.1576	-0.41722E-08	0.41548E-09
10	125.0	-235.14	0.91	-227.47	-219.74	0.1615	0.1657	0.1703	-0.27984E-08	0.57915E-09
11	150.0	-212.08	0.91	-204.20	-196.94	0.1751	0.1763	0.1739	0.48335E-08	0.15084E-08
12	175.0	-192.18	0.35	-189.75	-187.90	0.1736	0.1757	0.1773	-0.10357E-07	-0.27101E-08
13	200.0	-186.15	0.22	-184.41	-182.84	0.1788	0.1804	0.1818	-0.96472E-07	-0.13135E-07

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: B (Continue)

14	225.0	-181.36	0.17	-179.95	-178.64	0.1832	0.1846	0.1858	0.97353E-07	0.24172E-07
15	250.0	-177.40	0.14	-176.23	-175.12	0.1870	0.1882	0.1893	-0.11584E-06	-0.13003E-07
16	275.0	-174.08	0.12	-173.10	-172.17	0.1904	0.1914	0.1924	-0.12702E-06	-0.27913E-07
17	300.0	-171.29	0.10	-170.47	-169.68	0.1933	0.1942	0.1950	-0.57801E-06	0.40637E-07
18	325.0	-168.94	0.09	-168.24	-167.58	0.1958	0.1966	0.1973	0.42596E-06	0.19168E-07
19	350.0	-166.95	0.07	-166.35	-165.78	0.1980	0.1987	0.1993	0.18376E-05	0.30270E-07
20	375.0	-165.25	0.06	-164.73	-164.25	0.1999	0.2005	0.2010	0.96666E-06	0.74917E-07
21	400.0	-163.78	0.05	-163.33	-162.91	0.2016	0.2021	0.2026	0.70249E-05	0.33605E-06
22	425.0	-162.50	0.05	-162.10	-161.73	0.2031	0.2035	0.2040	0.43303E-04	0.33545E-05
23	450.0	-161.36	0.04	-161.00	-160.66	0.2044	0.2048	0.2052	0.24531E-03	0.14400E-04
24	475.0	-160.32	0.04	-160.00	-159.68	0.2056	0.2060	0.2064	0.74461E-03	0.20516E-04
25	500.0	-159.37	0.04	-159.07	-158.77	0.2068	0.2072	0.2075	0.83227E-03	-0.15987E-04
26	525.0	-158.47	0.03	-158.19	-157.90	0.2079	0.2082	0.2086	0.28194E-03	-0.19874E-04
27	550.0	-157.63	0.03	-157.35	-157.09	0.2089	0.2092	0.2096	0.24718E-04	-0.26874E-05
28	575.0	-156.82	0.03	-156.56	-156.31	0.2099	0.2102	0.2105	0.14187E-05	-0.20336E-06
29	600.0	-156.06	0.03	-155.81	-155.57	0.2109	0.2112	0.2115	-0.46477E-07	0.11688E-07
30	625.0	-155.34	0.03	-155.11	-154.89	0.2118	0.2120	0.2123	0.28666E-08	-0.45082E-08
31	650.0	-154.67	0.03	-154.46	-154.26	0.2126	0.2129	0.2131	0.28823E-08	0.53548E-09
32	675.0	-154.06	0.02	-153.87	-153.69	0.2134	0.2136	0.2139	-0.17349E-08	0.12916E-09
33	700.0	-153.52	0.02	-153.35	-153.19	0.2141	0.2143	0.2145	0.39706E-09	-0.93441E-10
34	725.0	-153.05	0.02	-152.91	-152.78	0.2147	0.2149	0.2150	-0.17062E-10	0.24514E-10
35	750.0	-152.66	0.01	-152.56	-152.46	0.2152	0.2153	0.2154	-0.24276E-10	-0.66302E-12
36	775.0	-152.38	0.01	-152.31	-152.26	0.2156	0.2156	0.2157	0.91629E-11	-0.16978E-11
37	800.0	-152.22	0.00	-152.20	-152.19	0.2158	0.2158	0.2158	-0.27069E-12	0.46449E-12
38	825.0	-152.20	0.00	-152.23	-152.29	0.2158	0.2157	0.2157	-0.44627E-12	0.14417E-13
39	850.0	-152.37	-0.01	-152.47	-152.61	0.2156	0.2154	0.2153	0.11512E-12	-0.34181E-13
40	875.0	-152.77	-0.02	-152.98	-153.23	0.2150	0.2148	0.2145	0.10238E-13	0.30936E-14
41	900.0	-153.53	-0.04	-153.89	-154.32	0.2141	0.2136	0.2131	-0.62082E-14	0.16099E-14
42	925.0	-154.83	-0.07	-155.44	-156.16	0.2124	0.2116	0.2107	-0.40677E-15	-0.13595E-15
43	950.0	-157.03	-0.11	-158.07	-159.32	0.2096	0.2084	0.2068	0.24511E-15	-0.86913E-16
44	975.0	-160.85	-0.20	-162.69	-164.97	0.2050	0.2028	0.2002	0.44222E-16	-0.56007E-17
45	1000.0	-167.80	-0.38	-171.32	-175.82	0.1971	0.1933	0.1886	-0.27379E-17	0.28784E-17
46	1025.0	-181.62	-0.79	-189.30	-199.82	0.1830	0.1761	0.1675	-0.23821E-17	0.10074E-17
47	1050.0	-214.16	-1.99	-236.44	-267.93	0.1574	0.1445	0.1308	-0.53601E-18	0.20983E-18
48	1075.0	-305.34	-4.71	-330.28	-335.82	0.1192	0.1135	0.1123	-0.10099E-18	0.46861E-19
49	1100.0	-335.76	-0.21	-336.67	-336.55	0.1123	0.1122	0.1122	-0.26394E-19	0.12380E-19
50	1125.0	-336.43	-0.02	-336.54	-336.53	0.1122	0.1122	0.1122	-0.70296E-20	0.32862E-20
51	1150.0	-336.52	0.00	-336.54	-336.57	0.1122	0.1122	0.1122	-0.18639E-20	0.86764E-21
52	1175.0	-336.59	0.00	-336.62	-336.67	0.1122	0.1122	0.1122	-0.49131E-21	0.22760E-21
53	1200.0	-336.73	-0.01	-336.80	-336.90	0.1122	0.1122	0.1122	-0.12864E-21	0.59263E-22
54	1225.0	-337.03	-0.02	-337.20	-337.41	0.1121	0.1121	0.1121	-0.33422E-22	0.15298E-22
55	1250.0	-337.68	-0.04	-338.01	-338.42	0.1120	0.1119	0.1118	-0.86072E-23	0.39082E-23
56	1275.0	-338.93	-0.07	-339.56	-340.33	0.1117	0.1116	0.1115	-0.22006E-23	0.98310E-24
57	1300.0	-341.26	-0.12	-342.33	-341.66	0.1113	0.1111	0.1112	-0.58472E-24	0.23038E-24
58	1325.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000

DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 89.444

MOISTURE INCREASE IN PROFILE......... 89.090

**********NORMAL TERMINATION AT TIME = 330.39536 DAYS AND STEP NUMBER = 790

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: C

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*******************************************************************************
*                                                                             *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                *
*                                                                             *
*    SUMAT43    data source: PRZM OUTPUT                                      *
*               TMAX:  330                                                    *
*               DICAMBA,  HIGH RAINFALL,  CN: C                               *
*                                                                             *
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INPUT PARAMETERS

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================
NUMBER OF NODES......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)..........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1.............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
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ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	329.9210	7918.1050	0.4751E+06	0.5000E+00	786	1	2115

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-334.10	1.00	-330.13	-326.56	0.0685	0.0690	0.0695	0.51913E-09	0.00000E+00
2	12.5	-323.31	0.75	-320.33	-317.58	0.0700	0.0705	0.0709	-0.27043E-09	-0.74884E-10
3	25.0	-315.00	0.60	-312.54	-310.19	0.0713	0.0717	0.0721	-0.67863E-09	0.10361E-11
4	37.5	-307.92	0.54	-305.67	-303.44	0.0725	0.0729	0.0733	-0.26907E-09	0.74976E-10
5	50.0	-301.26	0.52	-298.60	-295.19	0.0737	0.0900	0.1203	0.10151E-08	0.14013E-09
6	62.5	-291.48	0.89	-287.76	-284.03	0.1375	0.1387	0.1401	0.81163E-09	-0.15646E-09
7	75.0	-280.30	0.89	-276.57	-272.84	0.1414	0.1428	0.1443	-0.17541E-08	-0.18417E-10
8	87.5	-269.10	0.90	-265.35	-261.60	0.1457	0.1473	0.1488	0.29074E-08	0.11707E-08
9	100.0	-257.85	0.90	-250.31	-242.73	0.1505	0.1539	0.1576	0.70828E-08	0.67263E-09
10	125.0	-235.14	0.91	-227.46	-219.73	0.1615	0.1657	0.1703	-0.34630E-08	0.16738E-08
11	150.0	-212.07	0.91	-204.19	-196.93	0.1751	0.1763	0.1739	-0.25697E-08	0.26050E-08
12	175.0	-192.17	0.35	-189.74	-187.89	0.1736	0.1757	0.1773	-0.16092E-07	-0.69919E-08
13	200.0	-186.14	0.22	-184.40	-182.82	0.1788	0.1804	0.1818	-0.57747E-08	-0.89614E-08

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: C (Continue)

14	225.0	-181.34	0.18	-179.93	-178.61	0.1832	0.1846	0.1858	-0.33515E-07	0.26789E-07
15	250.0	-177.37	0.15	-176.20	-175.09	0.1871	0.1882	0.1893	-0.11771E-07	-0.29228E-07
16	275.0	-174.05	0.12	-173.06	-172.13	0.1904	0.1914	0.1924	-0.22979E-07	0.11473E-07
17	300.0	-171.25	0.10	-170.42	-169.63	0.1933	0.1942	0.1951	-0.57481E-06	-0.35698E-08
18	325.0	-168.89	0.09	-168.18	-167.52	0.1959	0.1966	0.1974	0.41606E-06	0.75779E-08
19	350.0	-166.88	0.07	-166.28	-165.71	0.1981	0.1987	0.1994	0.10203E-05	0.90594E-07
20	375.0	-165.16	0.06	-164.65	-164.15	0.2000	0.2006	0.2012	0.81434E-06	-0.63703E-07
21	400.0	-163.68	0.06	-163.23	-162.80	0.2017	0.2022	0.2027	0.45712E-05	0.27780E-06
22	425.0	-162.38	0.05	-161.98	-161.59	0.2032	0.2037	0.2041	0.21706E-04	0.17141E-05
23	450.0	-161.22	0.04	-160.86	-160.50	0.2046	0.2050	0.2054	0.14353E-03	0.92350E-05
24	475.0	-160.16	0.04	-159.83	-159.50	0.2058	0.2062	0.2066	0.56158E-03	0.22892E-04
25	500.0	-159.18	0.04	-158.87	-158.56	0.2070	0.2074	0.2078	0.90547E-03	-0.23945E-05
26	525.0	-158.26	0.04	-157.96	-157.66	0.2081	0.2085	0.2089	0.46865E-03	-0.24762E-04
27	550.0	-157.37	0.03	-157.09	-156.81	0.2092	0.2096	0.2099	0.64916E-04	-0.65839E-05
28	575.0	-156.53	0.03	-156.26	-155.99	0.2103	0.2106	0.2109	0.37045E-05	-0.38956E-06
29	600.0	-155.73	0.03	-155.47	-155.21	0.2113	0.2116	0.2119	-0.46092E-07	-0.14834E-07
30	625.0	-154.96	0.03	-154.72	-154.48	0.2122	0.2125	0.2129	0.38594E-07	-0.56214E-08
31	650.0	-154.24	0.03	-154.01	-153.79	0.2132	0.2134	0.2137	-0.85911E-08	0.20895E-08
32	675.0	-153.57	0.03	-153.36	-153.16	0.2140	0.2143	0.2145	0.21130E-09	-0.51874E-09
33	700.0	-152.96	0.02	-152.77	-152.59	0.2148	0.2150	0.2153	0.47547E-09	0.46593E-10
34	725.0	-152.41	0.02	-152.25	-152.09	0.2155	0.2157	0.2159	-0.21434E-09	0.26306E-10
35	750.0	-151.94	0.02	-151.80	-151.68	0.2161	0.2163	0.2165	0.38379E-10	-0.13056E-10
36	775.0	-151.56	0.01	-151.46	-151.36	0.2166	0.2168	0.2169	0.48910E-11	0.20663E-11
37	800.0	-151.28	0.01	-151.22	-151.17	0.2170	0.2171	0.2171	-0.35702E-11	0.39293E-12
38	825.0	-151.14	0.00	-151.12	-151.12	0.2172	0.2172	0.2172	0.66924E-12	-0.24949E-12
39	850.0	-151.15	0.00	-151.19	-151.26	0.2172	0.2171	0.2170	0.12302E-12	0.19405E-13
40	875.0	-151.36	-0.01	-151.50	-151.67	0.2169	0.2167	0.2165	-0.55960E-13	0.12312E-13
41	900.0	-151.88	-0.03	-152.13	-152.45	0.2162	0.2159	0.2155	-0.36849E-15	-0.21037E-14
42	925.0	-152.83	-0.05	-153.28	-153.83	0.2150	0.2144	0.2137	0.25494E-14	-0.58844E-15
43	950.0	-154.48	-0.09	-155.27	-156.21	0.2128	0.2119	0.2107	0.93538E-16	0.71709E-16
44	975.0	-157.36	-0.15	-158.74	-160.43	0.2092	0.2075	0.2055	-0.10010E-15	0.35965E-16
45	1000.0	-162.52	-0.28	-165.07	-168.27	0.2030	0.2001	0.1965	-0.18512E-16	0.29891E-17
46	1025.0	-172.38	-0.56	-177.56	-184.40	0.1921	0.1869	0.1804	0.40388E-18	-0.93242E-18
47	1050.0	-193.81	-1.32	-206.50	-225.24	0.1723	0.1626	0.1506	0.83356E-18	-0.40730E-18
48	1075.0	-254.03	-4.22	-291.49	-323.80	0.1363	0.1230	0.1148	0.23178E-18	-0.10988E-18
49	1100.0	-336.24	0.29	-335.47	-336.42	0.1123	0.1124	0.1122	0.62673E-19	-0.30458E-19
50	1125.0	-336.76	0.09	-336.40	-336.50	0.1121	0.1122	0.1122	0.17540E-19	-0.85003E-20
51	1150.0	-336.57	0.01	-336.53	-336.56	0.1122	0.1122	0.1122	0.48873E-20	-0.23646E-20
52	1175.0	-336.59	0.00	-336.62	-336.66	0.1122	0.1122	0.1122	0.13586E-20	-0.65625E-21
53	1200.0	-336.72	-0.01	-336.80	-336.90	0.1122	0.1121	0.1121	0.37682E-21	-0.18172E-21
54	1225.0	-337.03	-0.02	-337.20	-337.41	0.1121	0.1121	0.1120	0.10428E-21	-0.50203E-22
55	1250.0	-337.68	-0.04	-338.01	-338.42	0.1120	0.1119	0.1118	0.28803E-22	-0.13834E-22
56	1275.0	-338.93	-0.07	-339.56	-340.33	0.1117	0.1116	0.1115	0.79767E-23	-0.37854E-23
57	1300.0	-341.26	-0.12	-342.33	-341.66	0.1113	0.1111	0.1112	0.23453E-23	-0.96610E-24
58	1325.0	-336.50	1.00			0.1122			0.000 0.000	

INFILTRATION RATE................ 0.000

DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 91.261

MOISTURE INCREASE IN PROFILE......... 90.916

**********NORMAL TERMINATION AT TIME = 330.42104 DAYS AND STEP NUMBER = 787

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: A

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*******************************************************************************
*                                                                             *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                *
*     SUMAT43    data source: PRZM OUTPUT                                     *
*     TMAX:  320          CN= A                                               *
*     Dicamba,    Average Rainfall                                            *
*                                                                             *
*******************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP..................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  80.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

DCM-AV-A  **************************************************************************

ELAPSED TIME    DAYS      HOURS       MINUTES      DELT                        ISTEP   NIT   NITT
              320.0064 7680.1533   0.4608E+06   0.5000E+00                      757     1   1886
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-301.24	1.00	-297.41	-294.16	0.0737	0.0744	0.0750	0.32808E-09	0.00000E+00
2	12.5	-291.39	0.62	-289.12	-287.34	0.0756	0.0760	0.0764	-0.22337E-08	-0.76751E-09
3	25.0	-285.92	0.31	-284.90	-284.35	0.0767	0.0769	0.0770	-0.22801E-07	-0.88175E-08
4	37.5	-284.20	0.00	-284.40	-285.08	0.0771	0.0770	0.0769	-0.10044E-06	-0.19039E-07
5	50.0	-286.36	-0.39	-286.64	-284.93	0.0766	0.0928	0.1235	-0.91088E-08	-0.44509E-08
6	62.5	-282.33	0.65	-279.64	-276.94	0.1407	0.1417	0.1427	0.26275E-06	-0.67685E-07
7	75.0	-274.23	0.65	-271.51	-268.76	0.1437	0.1448	0.1459	-0.41163E-06	-0.13093E-06
8	87.5	-265.97	0.67	-263.15	-260.29	0.1470	0.1482	0.1494	-0.58580E-06	-0.19971E-06
9	100.0	-257.37	0.71	-254.41	-251.39	0.1507	0.1520	0.1534	-0.81718E-06	-0.46542E-06
10	112.5	-248.31	0.75	-245.17	-241.97	0.1549	0.1564	0.1580	-0.68182E-06	-0.87215E-06
11	125.0	-238.71	0.79	-235.39	-232.02	0.1596	0.1614	0.1632	0.58067E-05	-0.80429E-06
12	137.5	-228.58	0.83	-225.09	-221.54	0.1651	0.1671	0.1692	0.68692E-04	0.59439E-05
13	150.0	-217.95	0.86	-214.30	-210.58	0.1714	0.1737	0.1761	0.34533E-03	0.25444E-04
14	162.5	-206.91	0.87	-203.07	-199.68	0.1786	0.1771	0.1718	0.80857E-03	0.26402E-04
15	175.0	-198.15	0.03	-198.23	-198.64	0.1688	0.1687	0.1684	0.91363E-03	-0.14840E-04

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: A (Continue)

16	200.0	-198.71	0.04	-198.57	-198.43	0.1684	0.1685	0.1686	0.18457E-03	-0.18388E-04
17	212.5	-198.23	0.06	-197.97	-197.67	0.1687	0.1689	0.1692	0.40322E-04	-0.47905E-05
18	225.0	-197.33	0.09	-196.96	-196.56	0.1694	0.1697	0.1700	0.16143E-04	0.30272E-07
19	237.5	-196.14	0.10	-195.70	-195.24	0.1704	0.1707	0.1711	0.27937E-04	0.17489E-05
20	250.0	-194.77	0.11	-194.29	-193.80	0.1715	0.1719	0.1723	0.60816E-04	0.36261E-05
21	262.5	-193.30	0.12	-192.79	-192.28	0.1727	0.1731	0.1735	0.12365E-03	0.66636E-05
22	275.0	-191.77	0.12	-191.26	-190.74	0.1739	0.1744	0.1748	0.23697E-03	0.11756E-04
23	287.5	-190.23	0.12	-189.72	-189.22	0.1752	0.1757	0.1761	0.42445E-03	0.18062E-04
24	300.0	-188.71	0.12	-188.21	-187.72	0.1766	0.1770	0.1774	0.67153E-03	0.20230E-04
25	312.5	-187.23	0.12	-186.74	-186.26	0.1779	0.1783	0.1787	0.88326E-03	0.11938E-04
26	325.0	-185.79	0.11	-185.32	-184.86	0.1791	0.1796	0.1800	0.92943E-03	-0.51007E-05
27	337.5	-184.40	0.11	-183.95	-183.51	0.1804	0.1808	0.1812	0.76390E-03	-0.20084E-04
28	350.0	-183.07	0.10	-182.64	-182.21	0.1816	0.1820	0.1824	0.47914E-03	-0.23501E-04
29	362.5	-181.79	0.10	-181.37	-180.96	0.1828	0.1832	0.1836	0.22339E-03	-0.16461E-04
30	375.0	-180.56	0.10	-180.16	-179.77	0.1840	0.1844	0.1847	0.75612E-04	-0.75165E-05
31	387.5	-179.38	0.09	-178.99	-178.62	0.1851	0.1855	0.1858	0.18385E-04	-0.22949E-05
32	400.0	-178.24	0.09	-177.87	-177.51	0.1862	0.1866	0.1869	0.32421E-05	-0.48354E-06
33	412.5	-177.15	0.09	-176.79	-176.44	0.1873	0.1876	0.1880	0.42328E-06	-0.73624E-07
34	425.0	-176.10	0.08	-175.76	-175.42	0.1883	0.1887	0.1890	0.41608E-07	-0.83646E-08
35	437.5	-175.09	0.08	-174.76	-174.43	0.1894	0.1897	0.1900	0.34543E-08	-0.74991E-09
36	450.0	-174.11	0.08	-173.80	-173.49	0.1903	0.1907	0.1910	0.36739E-09	-0.72569E-10
37	462.5	-173.18	0.07	-172.88	-172:58	0.1913	0.1916	0.1919	0.51187E-10	-0.98196E-11
38	475.0	-172.28	0.07	-171.99	-171.71	0.1922	0.1925	0.1928	0.58040E-11	-0.12523E-11
39	487.5	-171.43	0.07	-171.15	-170.88	0.1931	0.1934	0.1937	0.45283E-12	-0.11828E-12
40	500.0	-170.61	0.06	-170.35	-170.09	0.1940	0.1943	0.1946	0.24432E-13	-0.86011E-14
41	512.5	-169.83	0.06	-169.59	-169.34	0.1948	0.1951	0.1954	0.86625E-15	-0.56886E-15
42	525.0	-169.11	0.06	-168.87	-168.65	0.1956	0.1959	0.1961	-0.51377E-16	-0.35174E-16
43	537.5	-168.43	0.05	-168.21	-168.00	0.1964	0.1966	0.1968	-0.26077E-16	0.14653E-18
44	550.0	-167.80	0.05	-167.61	-167.42	0.1971	0.1973	0.1975	-0.32798E-17	0.51811E-18
45	562.5	-167.24	0.04	-167.07	-166.91	0.1977	0.1979	0.1980	0.57751E-18	0.77220E-20
46	575.0	-166.75	0.04	-166.61	-166.47	0.1982	0.1984	0.1985	0.28376E-18	-0.31199E-19
47	587.5	-166.35	0.03	-166.24	-166.14	0.1987	0.1988	0.1989	0.40773E-19	-0.71477E-20
48	600.0	-166.05	0.02	-165.92	-165.85	0.1990	0.1992	0.1992	0.20886E-20	-0.43295E-21
49	625.0	-165.86	-0.01	-165.95	-166.15	0.1992	0.1991	0.1989	0.89614E-22	-0.30696E-22
50	650.0	-166.48	-0.05	-166.95	-167.60	0.1985	0.1980	0.1973	0.13423E-22	-0.52008E-23
51	675.0	-168.47	-0.12	-169.59	-171.05	0.1963	0.1951	0.1935	0.25056E-23	-0.10991E-23
52	700.0	-172.93	-0.26	-175.32	-178.38	0.1916	0.1891	0.1861	0.57010E-24	-0.28657E-24
53	725.0	-182.37	-0.55	-187.49	-194.30	0.1823	0.1776	0.1719	0.15822E-24	-0.88806E-25
54	750.0	-203.62	-1.30	-216.27	-234.56	0.1646	0.1560	0.1455	0.51785E-25	-0.30490E-25
55	775.0	-261.48	-3.87	-295.31	-324.50	0.1333	0.1219	0.1147	0.18829E-25	-0.10607E-25
56	800.0	-337.37	-0.10	-338.62	-340.21	0.1120	0.1118	0.1115	0.66737E-26	-0.33085E-26
57	825.0	-341.36	-0.08	-342.25	-341.61	0.1113	0.1111	0.1112	0.21039E-26	-0.88477E-27
58	850.0	-336.50	1:00			0.1122			0.000 0.000	

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 52.479
MOISTURE INCREASE IN PROFILE......... 52.228

**********NORMAL TERMINATION AT TIME = 320.00639 DAYS AND STEP NUMBER = 757

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: B

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*****************************************************************************
*                                                                           *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                              *
*                                                                           *
*     SUMA143    DATA SOURCE: PRZM Output                                   *
*     TRY  NODE WIDTH= 12.5,      TMAX:  320    FOR  AVG.  YEAR             *
*     DICAMBA,  CN: B                                                       *
*****************************************************************************
```

```
INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..........................(RAINFALL CODE)..........    1
KDRAIN.........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
```

DCM-AV-B ***

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	319.9160	7677.9849	0.4607E+06	0.5000E+00	761	1	1900

		PRESSURE HEAD				MOISTURE CONTENT			CONCENTRATION	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-300.81	1.00	-296.97	-293.73	0.0737	0.0745	0.0751	-0.30077E-08	0.00000E+00
2	12.5	-290.97	0.61	-288.70	-286.92	0.0757	0.0761	0.0765	-0.33720E-08	-0.36448E-08
3	25.0	-285.51	0.30	-284.50	-283.96	0.0768	0.0770	0.0771	-0.20826E-07	-0.12004E-07
4	37.5	-283.82	-0.01	-284.05	-284.74	0.0772	0.0771	0.0770	-0.97555E-07	-0.24900E-07
5	50.0	-286.05	-0.40	-286.36	-284.68	0.0767	0.0928	0.1235	-0.12982E-06	-0.26080E-07
6	62.5	-282.08	0.64	-279.40	-276.71	0.1408	0.1418	0.1428	0.62123E-07	-0.32094E-07
7	75.0	-274.02	0.65	-271.31	-268.57	0.1438	0.1449	0.1460	-0.70684E-08	-0.12122E-06
8	87.5	-265.80	0.67	-262.99	-260.13	0.1471	0.1483	0.1495	-0.46636E-06	-0.27224E-06
9	100.0	-257.23	0.70	-254.27	-251.26	0.1508	0.1521	0.1535	-0.10982E-05	-0.52118E-06
10	112.5	-248.19	0.74	-245.05	-241.86	0.1549	0.1564	0.1580	-0.97332E-06	-0.96991E-06
11	125.0	-238.61	0.79	-235.30	-231.92	0.1597	0.1614	0.1632	0.40647E-05	-0.13024E-05
12	137.5	-228.50	0.83	-225.01	-221.46	0.1651	0.1671	0.1692	0.54732E-04	0.37362E-05
13	150.0	-217.88	0.86	-214.22	-210.51	0.1714	0.1737	0.1762	0.29868E-03	0.21636E-04

PRZM+FEM Output Of Pesticide Concentration For Dicamba
Under Average Rainfall Year And CN: B (Continue)

14	162.5	-206.84	0.87	-203.00	-199.61	0.1786	0.1771	0.1718	0.75313E-03	0.26695E-04
15	175.0	-198.09	0.03	-198.18	-198.58	0.1688	0.1688	0.1685	0.91188E-03	-0.99061E-05
16	200.0	-198.65	0.04	-198.50	-198.36	0.1684	0.1685	0.1686	0.20989E-03	-0.20382E-04
17	212.5	-198.16	0.06	-197.89	-197.58	0.1688	0.1690	0.1692	0.47283E-04	-0.57579E-05
18	225.0	-197.24	0.09	-196.87	-196.47	0.1695	0.1698	0.1701	0.16110E-04	-0.26036E-06
19	237.5	-196.04	0.10	-195.60	-195.14	0.1704	0.1708	0.1712	0.24795E-04	0.14855E-05
20	250.0	-194.66	0.12	-194.18	-193.68	0.1716	0.1720	0.1724	0.53367E-04	0.31759E-05
21	262.5	-193.18	0.12	-192.67	-192.16	0.1728	0.1732	0.1736	0.10819E-03	0.57875E-05
22	275.0	-191.65	0.12	-191.13	-190.62	0.1741	0.1745	0.1749	0.20611E-03	0.10168E-04
23	287.5	-190.10	0.12	-189.59	-189.08	0.1754	0.1758	0.1762	0.37124E-03	0.16265E-04
24	300.0	-188.58	0.12	-188.08	-187.58	0.1767	0.1771	0.1775	0.60395E-03	0.20029E-04
25	312.5	-187.09	0.12	-186.60	-186.12	0.1780	0.1784	0.1788	0.83187E-03	0.14757E-04
26	325.0	-185.65	0.11	-185.18	-184.71	0.1793	0.1797	0.1801	0.92710E-03	-0.47825E-06
27	337.5	-184.26	0.11	-183.80	-183.36	0.1805	0.1809	0.1814	0.81356E-03	-0.16852E-04
28	350.0	-182.92	0.10	-182.49	-182.06	0.1818	0.1822	0.1826	0.54878E-03	-0.23568E-04
29	362.5	-181.64	0.10	-181.22	-180.81	0.1830	0.1833	0.1837	0.27689E-03	-0.18618E-04
30	375.0	-180.40	0.10	-180.00	-179.61	0.1841	0.1845	0.1849	0.10183E-03	-0.94606E-05
31	387.5	-179.22	0.09	-178.83	-178.45	0.1853	0.1856	0.1860	0.26890E-04	-0.31897E-05
32	400.0	-178.08	0.09	-177.71	-177.34	0.1864	0.1867	0.1871	0.51223E-05	-0.73387E-06
33	412.5	-176.98	0.09	-176.62	-176.27	0.1875	0.1878	0.1882	0.71771E-06	-0.12043E-06
34	425.0	-175.92	0.08	-175.58	-175.24	0.1885	0.1889	0.1892	0.75156E-07	-0.14630E-07
35	437.5	-174.91	0.08	-174.58	-174.25	0.1895	0.1899	0.1902	0.63221E-08	-0.13638E-08
36	450.0	-173.93	0.08	-173.61	-173.30	0.1905	0.1909	0.1912	0.61796E-09	-0.12460E-09
37	462.5	-172.99	0.07	-172.68	-172.38	0.1915	0.1918	0.1921	0.85299E-10	-0.16108E-10
38	475.0	-172.09	0.07	-171.79	-171.51	0.1925	0.1928	0.1931	0.10363E-10	-0.21586E-11
39	487.5	-171.22	0.07	-170.94	-170.67	0.1934	0.1937	0.1940	0.87384E-12	-0.21745E-12
40	500.0	-170.40	0.06	-170.13	-169.87	0.1942	0.1945	0.1948	0.49889E-13	-0.16430E-13
41	512.5	-169.61	0.06	-169.36	-169.11	0.1951	0.1954	0.1956	0.17500E-14	-0.10556E-14
42	525.0	-168.87	0.06	-168.63	-168.40	0.1959	0.1961	0.1964	-0.73373E-16	-0.62667E-16
43	537.5	-168.18	0.05	-167.96	-167.74	0.1966	0.1969	0.1971	-0.42593E-16	-0.76340E-18
44	550.0	-167.54	0.05	-167.33	-167.14	0.1973	0.1976	0.1978	-0.83066E-17	0.85557E-18
45	562.5	-166.95	0.04	-166.77	-166.60	0.1980	0.1982	0.1984	-0.61035E-18	0.14364E-18
46	575.0	-166.44	0.04	-166.29	-166.14	0.1986	0.1987	0.1989	0.58764E-19	0.18787E-21
47	587.5	-166.01	0.03	-165.88	-165.77	0.1991	0.1992	0.1993	0.87352E-20	-0.22536E-20
48	600.0	-165.67	0.02	-165.50	-165.40	0.1994	0.1996	0.1997	-0.13253E-20	0.10100E-21
49	625.0	-165.37	0.00	-165.41	-165.55	0.1998	0.1997	0.1996	0.31876E-22	-0.16309E-22
50	650.0	-165.81	-0.04	-166.19	-166.74	0.1993	0.1988	0.1982	0.96130E-23	-0.46206E-23
51	675.0	-167.48	-0.10	-168.45	-169.72	0.1974	0.1963	0.1950	0.25313E-23	-0.13395E-23
52	700.0	-171.35	-0.22	-173.43	-176.10	0.1932	0.1910	0.1883	0.74792E-24	-0.44694E-24
53	725.0	-179.56	-0.47	-183.99	-189.85	0.1849	0.1808	0.1756	0.26378E-24	-0.16410E-24
54	750.0	-197.65	-1.08	-208.31	-223.50	0.1692	0.1613	0.1516	0.10054E-24	-0.60531E-25
55	775.0	-244.92	-3.01	-276.71	-311.26	0.1404	0.1277	0.1177	0.37669E-25	-0.21242E-25
56	800.0	-332.66	-1.14	-338.65	-340.13	0.1130	0.1118	0.1115	0.13402E-25	-0.66787E-26
57	825.0	-340.99	-0.22	-342.49	-341.77	0.1113	0.1111	0.1112	0.42544E-26	-0.17882E-26
58	850.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE..................... 0.000

MOISTURE ADDED TO PROFILE............ 53.024
MOISTURE INCREASE IN PROFILE......... 52.792

**********NORMAL TERMINATION AT TIME = 320.41604 DAYS AND STEP NUMBER = 762

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: C

```
##############################################################################
#                                                                            #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                               #
#                                                                            #
#    SUMAT43    data source: CONTROL PARAMETER                               #
#    TRY  NODE WIDTH= 12.5,      TMAX:  320   FOR  AVG.  YEAR                #
#    DICAMBA, CN: C                                                          #
##############################################################################

INPUT PARAMETERS
================
NUMBER OF NODES.......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..........................(RAINFALL CODE)..........    1
KDRAIN.........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

DCM-AV-B ###################################################################################

ELAPSED TIME     DAYS      HOURS       MINUTES       DELT                          ISTEP    NIT   NITT
              319.8679 7676.8302   0.4606E+06   0.5000E+00                          758      1   1888
```

NODE	DEPTH	PRESSURE HEAD FUNCTN	GRAD	F(1/3)	F(2/3)	MOISTURE CONTENT FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-300.68	1.00	-296.85	-293.61	0.0738	0.0745	0.0751	-0.43207E-08	0.00000E+00
2	12.5	-290.84	0.62	-288.57	-286.81	0.0757	0.0761	0.0765	-0.40915E-08	-0.49170E-08
3	25.0	-285.39	0.31	-284.39	-283.86	0.0768	0.0770	0.0772	-0.12789E-07	-0.12171E-07
4	37.5	-283.72	-0.01	-283.95	-284.66	0.0772	0.0771	0.0770	-0.39489E-07	-0.20637E-07
5	50.0	-285.98	-0.40	-286.29	-284.61	0.0767	0.0929	0.1236	-0.68340E-07	-0.38431E-07
6	62.5	-282.02	0.64	-279.34	-276.66	0.1408	0.1418	0.1428	-0.16712E-06	-0.52536E-07
7	75.0	-273.97	0.65	-271.26	-268.52	0.1438	0.1449	0.1460	-0.40408E-07	-0.12653E-06
8	87.5	-265.75	0.67	-262.94	-260.08	0.1471	0.1483	0.1495	-0.35977E-06	-0.32941E-06
9	100.0	-257.18	0.70	-254.22	-251.21	0.1508	0.1521	0.1535	-0.11770E-05	-0.66710E-06
10	112.5	-248.14	0.74	-245.01	-241.81	0.1549	0.1564	0.1580	-0.16093E-05	-0.12664E-05
11	125.0	-238.56	0.79	-235.25	-231.87	0.1597	0.1614	0.1633	0.16140E-05	-0.21277E-05
12	137.5	-228.44	0.83	-224.95	-221.41	0.1652	0.1672	0.1693	0.38369E-04	0.54646E-06
13	150.0	-217.82	0.86	-214.17	-210.45	0.1715	0.1738	0.1762	0.24590E-03	0.16428E-04
14	162.5	-206.78	0.87	-202.94	-199.56	0.1787	0.1772	0.1719	0.71500E-03	0.28882E-04

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: C (Continue)

15	175.0	-198.02	0.04	-198.10	-198.48	0.1689	0.1688	0.1685	0.98779E-03	-0.43825E-06
16	200.0	-198.52	0.04	-198.37	-198.22	0.1685	0.1686	0.1687	0.28680E-03	-0.26595E-04
17	212.5	-198.01	0.06	-197.74	-197.43	0.1689	0.1691	0.1693	0.67692E-04	-0.85549E-05
18	225.0	-197.09	0.09	-196.71	-196.31	0.1696	0.1699	0.1702	0.17627E-04	-0.88373E-06
19	237.5	-195.88	0.10	-195.43	-194.97	0.1706	0.1709	0.1713	0.21597E-04	0.12100E-05
20	250.0	-194.49	0.12	-194.01	-193.51	0.1717	0.1721	0.1725	0.46277E-04	0.27998E-05
21	262.5	-193.01	0.12	-192.50	-191.98	0.1729	0.1733	0.1738	0.94897E-04	0.51445E-05
22	275.0	-191.47	0.12	-190.95	-190.44	0.1742	0.1746	0.1751	0.18192E-03	0.90565E-05
23	287.5	-189.92	0.12	-189.41	-188.90	0.1755	0.1760	0.1764	0.33106E-03	0.14937E-04
24	300.0	-188.39	0.12	-187.89	-187.39	0.1768	0.1773	0.1777	0.55233E-03	0.19762E-04
25	312.5	-186.90	0.12	-186.41	-185.93	0.1781	0.1786	0.1790	0.79096E-03	0.16797E-04
26	325.0	-185.45	0.11	-184.98	-184.51	0.1794	0.1799	0.1803	0.92359E-03	0.31791E-05
27	337.5	-184.06	0.11	-183.60	-183.16	0.1807	0.1811	0.1815	0.85318E-03	-0.13988E-04
28	350.0	-182.71	0.11	-182.28	-181.85	0.1819	0.1824	0.1828	0.60874E-03	-0.23268E-04
29	362.5	-181.43	0.10	-181.01	-180.59	0.1832	0.1836	0.1839	0.32664E-03	-0.20300E-04
30	375.0	-180.19	0.10	-179.78	-179.39	0.1843	0.1847	0.1851	0.12832E-03	-0.11247E-04
31	387.5	-179.00	0.09	-178.61	-178.23	0.1855	0.1859	0.1862	0.36247E-04	-0.41137E-05
32	400.0	-177.85	0.09	-177.48	-177.11	0.1866	0.1870	0.1873	0.73633E-05	-0.10192E-05
33	412.5	-176.75	0.09	-176.39	-176.03	0.1877	0.1880	0.1884	0.10948E-05	-0.17825E-06
34	425.0	-175.68	0.08	-175.34	-175.00	0.1888	0.1891	0.1894	0.12114E-06	-0.22927E-07
35	437.5	-174.66	0.08	-174.33	-174.00	0.1898	0.1901	0.1905	0.10435E-07	-0.22298E-08
36	450.0	-173.68	0.08	-173.35	-173.04	0.1908	0.1911	0.1915	0.94490E-09	-0.19612E-09
37	462.5	-172.73	0.07	-172.42	-172.11	0.1918	0.1921	0.1924	0.12480E-09	-0.23594E-10
38	475.0	-171.81	0.07	-171.52	-171.23	0.1927	0.1930	0.1934	0.15960E-10	-0.32466E-11
39	487.5	-170.94	0.07	-170.66	-170.38	0.1937	0.1940	0.1943	0.14418E-11	-0.34622E-12
40	500.0	-170.10	0.07	-169.83	-169.57	0.1946	0.1948	0.1951	0.87717E-13	-0.27264E-13
41	512.5	-169.31	0.06	-169.05	-168.80	0.1954	0.1957	0.1960	0.33726E-14	-0.17630E-14
42	525.0	-168.55	0.06	-168.31	-168.07	0.1962	0.1965	0.1968	-0.42911E-16	-0.10602E-15
43	537.5	-167.84	0.05	-167.62	-167.40	0.1970	0.1973	0.1975	-0.49239E-16	-0.35072E-17
44	550.0	-167.18	0.05	-166.97	-166.77	0.1977	0.1980	0.1982	-0.10744E-16	0.85551E-18
45	562.5	-166.58	0.05	-166.39	-166.21	0.1984	0.1986	0.1988	-0.11568E-17	0.20102E-18
46	575.0	-166.04	0.04	-165.88	-165.72	0.1990	0.1992	0.1994	-0.25521E-19	0.11569E-19
47	587.5	-165.58	0.03	-165.44	-165.32	0.1995	0.1997	0.1998	-0.25048E-20	-0.63472E-21
48	600.0	-165.20	0.03	-165.01	-164.88	0.2000	0.2002	0.2003	-0.36080E-20	0.43868E-21
49	625.0	-164.81	0.00	-164.82	-164.91	0.2004	0.2004	0.2003	-0.25958E-22	0.38946E-23
50	650.0	-165.11	-0.03	-165.42	-165.89	0.2001	0.1997	0.1992	-0.31689E-24	-0.88382E-24
51	675.0	-166.54	-0.09	-167.40	-168.53	0.1985	0.1975	0.1963	0.48435E-24	-0.80107E-24
52	700.0	-169.99	-0.20	-171.87	-174.27	0.1947	0.1927	0.1902	0.51694E-24	-0.48959E-24
53	725.0	-177.37	-0.42	-181.36	-186.59	0.1871	0.1832	0.1784	0.32576E-24	-0.23368E-24
54	750.0	-193.49	-0.94	-202.92	-216.20	0.1725	0.1652	0.1561	0.15200E-24	-0.93146E-25
55	775.0	-234.41	-2.52	-263.29	-298.63	0.1455	0.1326	0.1210	0.58625E-25	-0.32792E-25
56	800.0	-326.53	-2.35	-338.25	-340.09	0.1142	0.1119	0.1115	0.20603E-25	-0.10324E-25
57	825.0	-340.65	-0.34	-342.67	-341.90	0.1114	0.1110	0.1112	0.65903E-26	-0.27693E-26
58	850.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 53.518
MOISTURE INCREASE IN PROFILE......... 53.300

**********NORMAL TERMINATION AT TIME = 320.36792 DAYS AND STEP NUMBER = 759

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: A

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*****************************************************************************
*                                                                           *
*       ONE-DIMENSIONAL UNSATURATED TRANSPORT                               *
*                                                                           *
*    SUMA143    data source: PRZM OUTPUT                                    *
*    TRY  NODE WIDTH= 12.5,      TMAX:  265   FOR   LOW  YEAR               *
*    DICAMBA,  LOW RAINFALL,  CN: A                                         *
*                                                                           *
*****************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............    58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR IST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

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ELAPSED TIME    DAYS      HOURS       MINUTES       DELT                        ISTEP   NIT   NITT
             264.8341 6356.0180    0.3814E+06    0.5000E+00                      632     1   1172

                 ---------PRESSURE HEAD--------        ---MOISTURE CONTENT---    --------CONCENTRATION---------
NODE    DEPTH    FUNCTN    GRAD  F(1/3)  F(2/3)       FUNCTN  F(1/3)  F(2/3)    CONCENTRATION      GRADIENT
  1      0.0    -390.27    1.00 -386.18 -382.24       0.0624  0.0627  0.0631     0.70418E-05     0.00000E+00
  2     12.5    -378.43    0.90 -374.73 -371.13       0.0634  0.0638  0.0641     0.90177E-05     0.25850E-06
  3     25.0    -367.62    0.83 -364.20 -360.83       0.0645  0.0649  0.0652     0.12701E-04     0.39843E-06
  4     37.5    -357.53    0.79 -354.28 -351.06       0.0656  0.0659  0.0663     0.21516E-04     0.10679E-05
  5     50.0    -347.89    0.76 -344.46 -340.64       0.0667  0.0815  0.1090     0.37972E-04     0.17866E-05
  6     62.5    -336.68    0.95 -332.74 -328.80       0.1244  0.1254  0.1264     0.64862E-04     0.29580E-05
  7     75.0    -324.86    0.94 -320.94 -317.03       0.1274  0.1285  0.1296     0.12875E-03     0.74452E-05
  8     87.5    -313.12    0.94 -309.21 -305.30       0.1307  0.1318  0.1330     0.24836E-03     0.11514E-04
  9    100.0    -301.40    0.94 -297.50 -293.59       0.1342  0.1355  0.1368     0.41495E-03     0.15679E-04
 10    112.5    -289.69    0.94 -285.78 -281.87       0.1381  0.1394  0.1408     0.67411E-03     0.27282E-04
 11    125.0    -277.96    0.94 -274.04 -270.11       0.1423  0.1438  0.1453     0.11307E-02     0.45359E-04
 12    137.5    -266.18    0.94 -262.25 -258.30       0.1469  0.1486  0.1503     0.17710E-02     0.53058E-04
 13    150.0    -254.37    0.94 -250.40 -246.43       0.1520  0.1539  0.1558     0.23420E-02     0.33402E-04
```

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: A (Continue)

14	162.5	-242.51	0.93	-238.48	-234.75	0.1577	0.1555	0.1496	0.24396E-02	-0.74869E-05
15	175.0	-232.29	0.36	-229.82	-228.06	0.1467	0.1480	0.1490	0.18656E-02	-0.55868E-04
16	200.0	-226.38	0.22	-225.53	-224.76	0.1499	0.1504	0.1509	0.40309E-03	-0.33480E-04
17	212.5	-224.02	0.18	-223.29	-222.61	0.1513	0.1517	0.1521	0.10800E-03	-0.12536E-04
18	225.0	-221.95	0.16	-221.31	-220.70	0.1525	0.1529	0.1533	0.20239E-04	-0.29223E-05
19	237.5	-220.12	0.14	-219.56	-219.02	0.1536	0.1540	0.1543	0.27272E-05	-0.47105E-06
20	250.0	-218.51	0.12	-218.02	-217.55	0.1546	0.1549	0.1552	0.28334E-06	-0.56401E-07
21	262.5	-217.10	0.11	-216.67	-216.26	0.1555	0.1558	0.1560	0.27803E-07	-0.58818E-08
22	275.0	-215.87	0.09	-215.49	-215.14	0.1563	0.1565	0.1567	0.38220E-08	-0.71267E-09
23	287.5	-214.80	0.08	-214.48	-214.18	0.1570	0.1572	0.1574	0.67622E-09	-0.12363E-09
24	300.0	-213.89	0.07	-213.62	-213.37	0.1575	0.1577	0.1579	0.88786E-10	-0.19539E-10
25	312.5	-213.13	0.05	-212.91	-212.71	0.1580	0.1582	0.1583	0.71481E-11	-0.20674E-11
26	325.0	-212.52	0.04	-212.35	-212.20	0.1584	0.1586	0.1587	0.52297E-12	-0.18248E-12
27	337.5	-212.07	0.03	-211.95	-211.85	0.1587	0.1588	0.1589	0.67927E-13	-0.21015E-13
28	350.0	-211.78	0.02	-211.72	-211.69	0.1589	0.1590	0.1590	0.35815E-14	-0.25012E-14
29	362.5	-211.67	0.00	-211.69	-211.72	0.1590	0.1590	0.1590	0.11659E-14	-0.27808E-15
30	375.0	-211.79	-0.02	-211.88	-212.00	0.1589	0.1589	0.1588	0.12411E-15	-0.43882E-16
31	387.5	-212.16	-0.04	-212.35	-212.58	0.1587	0.1586	0.1584	0.17897E-16	-0.12397E-16
32	400.0	-212.85	-0.07	-213.17	-213.53	0.1582	0.1580	0.1578	0.45134E-17	-0.33799E-17
33	412.5	-213.94	-0.11	-214.41	-214.95	0.1575	0.1572	0.1569	0.10195E-17	-0.53861E-18
34	425.0	-215.54	-0.15	-216.21	-216.96	0.1565	0.1560	0.1556	0.10179E-18	0.28451E-19
35	437.5	-217.79	-0.21	-218.72	-219.75	0.1550	0.1545	0.1538	-0.31750E-19	0.47563E-19
36	450.0	-220.90	-0.29	-222.16	-223.57	0.1531	0.1524	0.1515	-0.18582E-19	0.15530E-19
37	462.5	-225.12	-0.39	-226.84	-228.74	0.1506	0.1497	0.1486	-0.46980E-20	0.25242E-20
38	475.0	-230.84	-0.53	-233.16	-235.72	0.1474	0.1462	0.1449	-0.49663E-21	-0.10634E-21
39	487.5	-238.56	-0.72	-241.70	-245.16	0.1434	0.1419	0.1403	0.12493E-21	-0.21782E-21
40	500.0	-248.98	-0.96	-253.19	-257.81	0.1385	0.1367	0.1347	0.82778E-22	-0.83723E-22
41	512.5	-262.87	-1.27	-268.37	-274.31	0.1327	0.1306	0.1285	0.26196E-22	-0.21833E-22
42	525.0	-280.63	-1.56	-287.26	-294.06	0.1264	0.1243	0.1223	0.60513E-23	-0.44189E-23
43	537.5	-300.83	-1.61	-307.35	-313.38	0.1204	0.1187	0.1172	0.11037E-23	-0.68556E-24
44	550.0	-318.71	-1.18	-323.18	-326.80	0.1160	0.1150	0.1142	0.14928E-24	-0.54354E-25
45	562.5	-329.60	-0.58	-331.67	-333.18	0.1136	0.1132	0.1129	0.44721E-26	0.17067E-25
46	575.0	-334.25	-0.21	-334.99	-335.50	0.1126	0.1125	0.1124	-0.76911E-26	0.12370E-25
47	587.5	-335.84	-0.07	-336.07	-336.22	0.1123	0.1123	0.1123	-0.46747E-26	0.48885E-26
48	600.0	-336.32	-0.02	-336.43	-336.47	0.1122	0.1122	0.1122	-0.22525E-26	0.76994E-27
49	625.0	-336.49	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	-0.34140E-27	0.17018E-27
50	650.0	-336.50	0.00	-336.51	-336.51	0.1122	0.1122	0.1122	-0.98200E-28	0.50696E-28
51	675.0	-336.52	0.00	-336.53	-336.54	0.1122	0.1122	0.1122	-0.29783E-28	0.15329E-28
52	700.0	-336.56	0.00	-336.58	-336.61	0.1122	0.1122	0.1122	-0.90002E-29	0.46106E-29
53	725.0	-336.66	-0.01	-336.73	-336.81	0.1122	0.1122	0.1121	-0.27029E-29	0.13787E-29
54	750.0	-336.93	-0.02	-337.08	-337.28	0.1121	0.1121	0.1120	-0.80706E-30	0.41004E-30
55	775.0	-337.53	-0.03	-337.86	-338.27	0.1120	0.1119	0.1119	-0.23986E-30	0.12132E-30
56	800.0	-338.78	-0.07	-339.41	-340.20	0.1118	0.1116	0.1115	-0.71391E-31	0.35532E-31
57	825.0	-341.16	-0.13	-342.27	-341.64	0.1113	0.1111	0.1112	-0.22672E-31	0.96218E-32
58	850.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 20.499
MOISTURE INCREASE IN PROFILE......... 20.243

**********NORMAL TERMINATION AT TIME = 265.33408 DAYS AND STEP NUMBER = 633

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: B

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*******************************************************************************
*                                                                             *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                *
*                                                                             *
*    SUMAT43    data source: PRZM OUTPUT                                      *
*    TRY  NODE WIDTH= 12.5,      TMAX:  265   FOR   LOW  YEAR                 *
*    DICAMBA,  LOW RAINFALL,  CN: B                                           *
*                                                                             *
*******************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

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ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	265.0640	6361.5362	0.3817E+06	0.5000E+00	632	1	1192

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-390.24	1.00	-386.15	-382.21	0.0624	0.0627	0.0631	0.80091E-05	0.00000E+00
2	12.5	-378.40	0.90	-374.70	-371.10	0.0634	0.0638	0.0641	0.88009E-05	0.14962E-06
3	25.0	-367.60	0.83	-364.17	-360.80	0.0645	0.0649	0.0652	0.12290E-04	0.44336E-06
4	37.5	-357.50	0.79	-354.24	-351.03	0.0656	0.0660	0.0663	0.21152E-04	0.10396E-05
5	50.0	-347.86	0.76	-344.43	-340.61	0.0667	0.0815	0.1090	0.37875E-04	0.18725E-05
6	62.5	-336.65	0.95	-332.70	-328.76	0.1244	0.1254	0.1264	0.65453E-04	0.29618E-05
7	75.0	-324.83	0.94	-320.90	-316.99	0.1274	0.1285	0.1296	0.12866E-03	0.73415E-05
8	87.5	-313.08	0.94	-309.17	-305.27	0.1307	0.1318	0.1330	0.24730E-03	0.11503E-04
9	100.0	-301.36	0.94	-297.46	-293.55	0.1342	0.1355	0.1368	0.41502E-03	0.15815E-04
10	112.5	-289.65	0.94	-285.74	-281.83	0.1381	0.1395	0.1409	0.67325E-03	0.26868E-04
11	125.0	-277.92	0.94	-274.00	-270.07	0.1423	0.1438	0.1454	0.11184E-02	0.43982E-04
12	137.5	-266.14	0.94	-262.21	-258.26	0.1469	0.1486	0.1503	0.17407E-02	0.51747E-04
13	150.0	-254.33	0.94	-250.36	-246.39	0.1521	0.1539	0.1558	0.23110E-02	0.34347E-04

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: B (Continue)

14	162.5	-242.47	0.93	-238.44	-234.71	0.1577	0.1555	0.1496	0.24473E-02	-0.44699E-05
15	175.0	-232.24	0.36	-229.78	-228.01	0.1467	0.1480	0.1490	0.19221E-02	-0.53274E-04
16	200.0	-226.33	0.22	-225.47	-224.70	0.1500	0.1504	0.1509	0.44398E-03	-0.35980E-04
17	212.5	-223.96	0.18	-223.23	-222.54	0.1513	0.1517	0.1522	0.12329E-03	-0.14018E-04
18	225.0	-221.88	0.16	-221.24	-220.63	0.1525	0.1529	0.1533	0.23910E-04	-0.33955E-05
19	237.5	-220.04	0.14	-219.48	-218.94	0.1537	0.1540	0.1543	0.33250E-05	-0.56547E-06
20	250.0	-218.42	0.12	-217.93	-217.45	0.1547	0.1550	0.1553	0.35400E-06	-0.69535E-07
21	262.5	-217.00	0.11	-216.57	-216.15	0.1555	0.1558	0.1561	0.34527E-07	-0.73006E-08
22	275.0	-215.75	0.09	-215.38	-215.02	0.1563	0.1566	0.1568	0.45946E-08	-0.85734E-09
23	287.5	-214.67	0.08	-214.35	-214.04	0.1570	0.1572	0.1574	0.83391E-09	-0.14825E-09
24	300.0	-213.75	0.07	-213.47	-213.21	0.1576	0.1578	0.1580	0.11669E-09	-0.24670E-10
25	312.5	-212.97	0.06	-212.74	-212.53	0.1581	0.1583	0.1584	0.98798E-11	-0.27326E-11
26	325.0	-212.34	0.04	-212.16	-212.00	0.1586	0.1587	0.1588	0.68895E-12	-0.23375E-12
27	337.5	-211.86	0.03	-211.73	-211.62	0.1589	0.1590	0.1590	0.88483E-13	-0.26235E-13
28	350.0	-211.54	0.02	-211.47	-211.42	0.1591	0.1591	0.1592	0.13021E-13	-0.33357E-14
29	362.5	-211.39	0.00	-211.39	-211.41	0.1592	0.1592	0.1592	0.15836E-14	-0.39573E-15
30	375.0	-211.45	-0.01	-211.53	-211.63	0.1592	0.1591	0.1590	0.16984E-15	-0.60808E-16
31	387.5	-211.76	-0.04	-211.93	-212.14	0.1589	0.1588	0.1587	0.23430E-16	-0.14897E-16
32	400.0	-212.38	-0.06	-212.66	-212.99	0.1585	0.1583	0.1581	0.52160E-17	-0.36298E-17
33	412.5	-213.37	-0.10	-213.80	-214.29	0.1579	0.1576	0.1573	0.10506E-17	-0.50385E-18
34	425.0	-214.84	-0.14	-215.46	-216.16	0.1569	0.1565	0.1561	0.79524E-19	0.53439E-19
35	437.5	-216.93	-0.20	-217.80	-218.76	0.1556	0.1550	0.1544	-0.40535E-19	0.53386E-19
36	450.0	-219.82	-0.27	-221.01	-222.32	0.1538	0.1531	0.1523	-0.20066E-19	0.15693E-19
37	462.5	-223.77	-0.37	-225.37	-227.15	0.1514	0.1505	0.1495	-0.45601E-20	0.21064E-20
38	475.0	-229.11	-0.50	-231.28	-233.69	0.1484	0.1472	0.1459	-0.31803E-21	-0.29615E-21
39	487.5	-236.34	-0.67	-239.28	-242.53	0.1445	0.1431	0.1415	0.18860E-21	-0.26636E-21
40	500.0	-246.11	-0.90	-250.07	-254.42	0.1398	0.1380	0.1361	0.96343E-22	-0.90419E-22
41	512.5	-259.20	-1.20	-264.43	-270.10	0.1342	0.1321	0.1300	0.27403E-22	-0.21186E-22
42	525.0	-276.20	-1.51	-282.67	-289.41	0.1279	0.1257	0.1237	0.56097E-23	-0.36164E-23
43	537.5	-296.26	-1.65	-303.02	-309.43	0.1217	0.1198	0.1182	0.81331E-24	-0.34613E-24
44	550.0	-315.28	-1.32	-320.34	-324.54	0.1168	0.1156	0.1147	0.41021E-25	0.55815E-25
45	562.5	-327.88	-0.70	-330.41	-332.28	0.1140	0.1134	0.1130	-0.28604E-25	0.48515E-25
46	575.0	-333.62	-0.27	-334.56	-335.20	0.1128	0.1126	0.1125	-0.16844E-25	0.20663E-25
47	587.5	-335.64	-0.09	-335.94	-336.13	0.1124	0.1123	0.1123	-0.71124E-26	0.68871E-26
48	600.0	-336.26	-0.02	-336.40	-336.46	0.1122	0.1122	0.1122	-0.29952E-26	0.10181E-26
49	625.0	-336.48	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	-0.45210E-27	0.22165E-27
50	650.0	-336.50	0.00	-336.51	-336.51	0.1122	0.1122	0.1122	-0.12726E-27	0.64478E-28
51	675.0	-336.52	0.00	-336.53	-336.54	0.1122	0.1122	0.1122	-0.37651E-28	0.19047E-28
52	700.0	-336.56	0.00	-336.58	-336.61	0.1122	0.1122	0.1122	-0.11120E-28	0.56063E-29
53	725.0	-336.66	-0.01	-336.73	-336.81	0.1122	0.1122	0.1121	-0.32694E-29	0.16431E-29
54	750.0	-336.93	-0.02	-337.08	-337.28	0.1121	0.1121	0.1120	-0.95718E-30	0.47961E-30
55	775.0	-337.53	-0.03	-337.86	-338.27	0.1120	0.1119	0.1119	-0.27925E-30	0.13941E-30
56	800.0	-338.78	-0.07	-339.41	-340.20	0.1118	0.1116	0.1115	-0.81639E-31	0.40155E-31
57	825.0	-341.16	-0.13	-342.27	-341.64	0.1113	0.1111	0.1112	-0.25442E-31	0.10720E-31
58	850.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 20.721
MOISTURE INCREASE IN PROFILE......... 20.417

**********NORMAL TERMINATION AT TIME = 265.06401 DAYS AND STEP NUMBER = 632

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: C

```
*************************************************************************************
*                                                                                   *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                      *
*                                                                                   *
*     SUMA143    data source: PRZM OUTPUT                                           *
*********   TRY  NODE WIDTH= 12.5,      TMAX:  265   FOR   LOW  YEAR                *
*           DICAMBA,   LOW RAINFALL,    CN: C                                       *
*                                                                                   *
*************************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)................   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS).............. 5000
INITIAL TIME STEP...................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1.............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3..............(WRITE MATERIAL PROPERTIES)..........    4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

*********************************************************************************************
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ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	265.0919	6362.2055	0.3817E+06	0.5000E+00	634	1	1191

		PRESSURE HEAD				MOISTURE CONTENT			CONCENTRATION	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-390.25	1.00	-386.16	-382.22	0.0624	0.0627	0.0631	0.77806E-05	0.00000E+00
2	12.5	-378.41	0.90	-374.71	-371.11	0.0634	0.0638	0.0641	0.90401E-05	0.20871E-06
3	25.0	-367.60	0.83	-364.17	-360.81	0.0645	0.0649	0.0652	0.12903E-04	0.43725E-06
4	37.5	-357.51	0.79	-354.25	-351.04	0.0656	0.0660	0.0663	0.21854E-04	0.10787E-05
5	50.0	-347.86	0.76	-344.43	-340.61	0.0667	0.0815	0.1090	0.38974E-04	0.18484E-05
6	62.5	-336.65	0.95	-332.71	-328.76	0.1244	0.1254	0.1264	0.65531E-04	0.28519E-05
7	75.0	-324.83	0.94	-320.91	-316.99	0.1274	0.1285	0.1296	0.12763E-03	0.72985E-05
8	87.5	-313.08	0.94	-309.17	-305.27	0.1307	0.1318	0.1330	0.24630E-03	0.11517E-04
9	100.0	-301.37	0.94	-297.46	-293.56	0.1342	0.1355	0.1368	0.41268E-03	0.15513E-04
10	112.5	-289.65	0.94	-285.75	-281.83	0.1381	0.1395	0.1409	0.66307E-03	0.25901E-04
11	125.0	-277.92	0.94	-274.00	-270.08	0.1423	0.1438	0.1453	0.10931E-02	0.42616E-04
12	137.5	-266.15	0.94	-262.21	-258.27	0.1469	0.1486	0.1503	0.17018E-02	0.51032E-04
13	150.0	-254.33	0.94	-250.37	-246.39	0.1521	0.1539	0.1558	0.22787E-02	0.35669E-04

PRZM+FEM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: C (Continue)

14	162.5	-242.47	0.93	-238.44	-234.71	0.1577	0.1555	0.1496	0.24512E-02	-0.19091E-05
15	175.0	-232.25	0.36	-229.78	-228.01	0.1467	0.1480	0.1490	0.19655E-02	-0.51268E-04
16	200.0	-226.32	0.22	-225.47	-224.70	0.1500	0.1504	0.1509	0.47563E-03	-0.37889E-04
17	212.5	-223.95	0.18	-223.22	-222.53	0.1513	0.1518	0.1522	0.13529E-03	-0.15165E-04
18	225.0	-221.87	0.16	-221.23	-220.61	0.1526	0.1529	0.1533	0.26843E-04	-0.37698E-05
19	237.5	-220.02	0.14	-219.46	-218.92	0.1537	0.1540	0.1543	0.38108E-05	-0.64140E-06
20	250.0	-218.40	0.12	-217.90	-217.42	0.1547	0.1550	0.1553	0.41259E-06	-0.80312E-07
21	262.5	-216.96	0.11	-216.53	-216.11	0.1556	0.1558	0.1561	0.40178E-07	-0.84837E-08
22	275.0	-215.71	0.09	-215.33	-214.96	0.1564	0.1566	0.1568	0.52396E-08	-0.97763E-09
23	287.5	-214.62	0.08	-214.29	-213.98	0.1571	0.1573	0.1575	0.96658E-09	-0.16853E-09
24	300.0	-213.68	0.07	-213.40	-213.13	0.1577	0.1579	0.1580	0.14119E-09	-0.23014E-10
25	312.5	-212.88	0.06	-212.65	-212.43	0.1582	0.1584	0.1585	0.12495E-10	-0.33335E-11
26	325.0	-212.23	0.05	-212.05	-211.88	0.1586	0.1588	0.1589	0.85952E-12	-0.28416E-12
27	337.5	-211.73	0.03	-211.59	-211.48	0.1590	0.1591	0.1591	0.10558E-12	-0.30929E-13
28	350.0	-211.38	0.02	-211.30	-211.24	0.1592	0.1593	0.1593	0.15822E-13	-0.40285E-14
29	362.5	-211.21	0.01	-211.19	-211.20	0.1593	0.1593	0.1593	0.19495E-14	-0.49218E-15
30	375.0	-211.23	-0.01	-211.29	-211.38	0.1593	0.1593	0.1592	0.20931E-15	-0.73409E-16
31	387.5	-211.49	-0.03	-211.64	-211.83	0.1591	0.1590	0.1589	0.27568E-16	-0.16611E-16
32	400.0	-212.05	-0.06	-212.31	-212.62	0.1588	0.1586	0.1584	0.57244E-17	-0.38561E-17
33	412.5	-212.97	-0.09	-213.38	-213.84	0.1581	0.1579	0.1576	0.11008E-17	-0.51307E-18
34	425.0	-214.36	-0.13	-214.94	-215.60	0.1572	0.1569	0.1564	0.76554E-19	0.61276E-19
35	437.5	-216.34	-0.19	-217.16	-218.07	0.1560	0.1554	0.1549	-0.43815E-19	0.56144E-19
36	450.0	-219.08	-0.26	-220.21	-221.46	0.1542	0.1536	0.1528	-0.20907E-19	0.15976E-19
37	462.5	-222.84	-0.35	-224.37	-226.06	0.1520	0.1511	0.1501	-0.45781E-20	0.19682E-20
38	475.0	-227.94	-0.47	-230.01	-232.31	0.1490	0.1479	0.1467	-0.24925E-21	-0.37935E-21
39	487.5	-234.85	-0.64	-237.65	-240.75	0.1453	0.1439	0.1423	0.21837E-21	-0.29015E-21
40	500.0	-244.18	-0.86	-247.97	-252.15	0.1407	0.1390	0.1371	0.10335E-21	-0.93355E-22
41	512.5	-256.74	-1.15	-261.77	-267.26	0.1352	0.1331	0.1311	0.28089E-22	-0.20855E-22
42	525.0	-273.18	-1.47	-279.52	-286.18	0.1289	0.1268	0.1246	0.53760E-23	-0.31777E-23
43	537.5	-293.04	-1.66	-299.90	-306.53	0.1226	0.1207	0.1189	0.65287E-24	-0.15867E-24
44	550.0	-312.70	-1.41	-318.15	-322.77	0.1174	0.1161	0.1151	-0.19068E-25	0.11620E-24
45	562.5	-326.51	-0.79	-329.39	-331.54	0.1143	0.1136	0.1132	-0.46698E-25	0.65392E-25
46	575.0	-333.10	-0.31	-334.20	-334.96	0.1129	0.1127	0.1125	-0.21718E-25	0.24984E-25
47	587.5	-335.48	-0.10	-335.83	-336.06	0.1124	0.1123	0.1123	-0.83636E-26	0.78937E-26
48	600.0	-336.21	-0.03	-336.38	-336.45	0.1123	0.1122	0.1122	-0.33614E-26	0.11402E-26
49	625.0	-336.48	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	-0.50658E-27	0.24677E-27
50	650.0	-336.50	0.00	-336.51	-336.51	0.1122	0.1122	0.1122	-0.14140E-27	0.71113E-28
51	675.0	-336.52	0.00	-336.53	-336.54	0.1122	0.1122	0.1122	-0.41423E-28	0.20806E-28
52	700.0	-336.56	0.00	-336.58	-336.61	0.1122	0.1122	0.1122	-0.12118E-28	0.60685E-29
53	725.0	-336.66	-0.01	-336.73	-336.81	0.1122	0.1122	0.1121	-0.35309E-29	0.17631E-29
54	750.0	-336.93	-0.02	-337.08	-337.28	0.1121	0.1121	0.1120	-0.10249E-29	0.51032E-30
55	775.0	-337.53	-0.03	-337.86	-338.27	0.1120	0.1119	0.1119	-0.29650E-30	0.14713E-30
56	800.0	-338.78	-0.07	-339.41	-340.20	0.1118	0.1116	0.1115	-0.85969E-31	0.42050E-31
57	825.0	-341.16	-0.13	-342.27	-341.64	0.1113	0.1111	0.1112	-0.26553E-31	0.11149E-31
58	850.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE..................... 0.000

MOISTURE ADDED TO PROFILE............ 20.852
MOISTURE INCREASE IN PROFILE......... 20.535

**********NORMAL TERMINATION AT TIME = 265.09190 DAYS AND STEP NUMBER = 634

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: A

```
#################################################################
#                                                               #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                  #
#                                                               #
#    SUMAT43    data source: PRZM OUTPUT                        #
#    TRY  NODE WIDTH= 12.5,     TMAX: 330   FOR  HIGH  YEAR     #
#    2,4-D,    HIGH RAINFALL,   CN: A                           #
#                                                               #
#################################################################
```

```
INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3..............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
```

```
##########################################################################################
```

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	330.0549	7921.3174	0.4753E+06	0.5000E+00	766	1	2043

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-335.75	1.01	-331.77	-328.21	0.0682	0.0688	0.0693	0.88899E-16	0.00000E+00
2	12.5	-324.98	0.74	-322.01	-319.28	0.0698	0.0702	0.0706	0.48513E-15	0.22529E-16
3	25.0	-316.73	0.60	-314.31	-312.00	0.0710	0.0714	0.0718	0.28943E-15	0.11705E-16
4	37.5	-309.77	0.53	-307.57	-305.40	0.0722	0.0725	0.0729	0.38159E-15	-0.21077E-16
5	50.0	-303.28	0.50	-300.66	-297.27	0.0733	0.0895	0.1197	0.28788E-15	0.63244E-17
6	62.5	-293.57	0.89	-289.86	-286.14	0.1368	0.1380	0.1393	0.31514E-15	-0.10450E-17
7	75.0	-282.42	0.89	-278.70	-274.98	0.1406	0.1420	0.1434	0.24457E-15	-0.11088E-16
8	87.5	-271.25	0.90	-267.52	-263.78	0.1449	0.1464	0.1479	0.83332E-16	-0.10974E-16
9	100.0	-260.04	0.90	-256.28	-252.52	0.1495	0.1512	0.1529	0.80133E-17	-0.22877E-17
10	112.5	-248.75	0.91	-244.97	-241.18	0.1546	0.1565	0.1584	0.31417E-18	-0.83649E-21

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: A (Continue)

11	125.0	-237.38	0.91	-233.56	-229.74	0.1603	0.1623	0.1644	-0.72445E-19	0.13706E-20
12	137.5	-225.90	0.92	-222.05	-218.19	0.1666	0.1689	0.1712	0.21247E-19	-0.77812E-20
13	150.0	-214.33	0.93	-210.43	-206.52	0.1737	0.1762	0.1789	-0.20158E-20	0.14064E-20
14	162.5	-202.66	0.92	-198.69	-195.05	0.1816	0.1803	0.1754	-0.85323E-21	0.81443E-22
15	175.0	-192.70	0.33	-190.31	-188.42	0.1732	0.1752	0.1768	0.13731E-21	-0.54008E-22
16	200.0	-186.63	0.23	-185.73	-184.89	0.1784	0.1792	0.1799	0.72205E-23	-0.17742E-22
17	212.5	-184.08	0.19	-183.29	-182.52	0.1807	0.1814	0.1821	0.93791E-23	-0.23465E-23
18	225.0	-181.78	0.18	-181.06	-180.36	0.1828	0.1835	0.1842	-0.97868E-24	0.12994E-23
19	237.5	-179.68	0.16	-179.02	-178.39	0.1848	0.1855	0.1861	-0.47028E-24	0.36153E-24
20	250.0	-177.77	0.15	-177.16	-176.58	0.1867	0.1873	0.1879	-0.11029E-24	0.30835E-25
21	262.5	-176.01	0.13	-175.46	-174.93	0.1884	0.1890	0.1895	0.18798E-26	-0.16845E-25
22	275.0	-174.41	0.12	-173.90	-173.41	0.1900	0.1906	0.1911	0.88042E-26	-0.77060E-26
23	287.5	-172.94	0.11	-172.47	-172.02	0.1916	0.1920	0.1925	0.25950E-26	-0.10397E-26
24	300.0	-171.59	0.10	-171.16	-170.75	0.1930	0.1934	0.1939	0.87611E-28	0.27783E-27
25	312.5	-170.35	0.10	-169.96	-169.58	0.1943	0.1947	0.1951	-0.16822E-27	0.15652E-27
26	325.0	-169.21	0.09	-168.85	-168.50	0.1955	0.1959	0.1963	-0.54030E-28	0.24493E-28
27	337.5	-168.16	0.08	-167.83	-167.51	0.1967	0.1970	0.1974	-0.31770E-29	-0.41567E-29
28	350.0	-167.19	0.07	-166.89	-166.59	0.1977	0.1981	0.1984	0.28713E-29	-0.28766E-29
29	362.5	-166.30	0.07	-166.02	-165.75	0.1987	0.1990	0.1993	0.10377E-29	-0.51249E-30
30	375.0	-165.48	0.06	-165.22	-164.97	0.1996	0.1999	0.2002	0.88255E-31	0.65787E-31
31	387.5	-164.72	0.06	-164.48	-164.25	0.2005	0.2008	0.2010	-0.51365E-31	0.58518E-31
32	400.0	-164.02	0.05	-163.80	-163.58	0.2013	0.2016	0.2018	-0.22167E-31	0.13127E-31
33	412.5	-163.37	0.05	-163.16	-162.96	0.2021	0.2023	0.2025	-0.30632E-32	-0.28617E-33
34	425.0	-162.77	0.05	-162.57	-162.39	0.2028	0.2030	0.2032	0.68462E-33	-0.11003E-32
35	437.5	-162.21	0.04	-162.03	-161.86	0.2034	0.2036	0.2038	0.45378E-33	-0.34741E-33
36	450.0	-161.70	0.04	-161.54	-161.39	0.2040	0.2042	0.2044	0.10284E-33	-0.36472E-34
37	462.5	-161.24	0.03	-161.10	-160.97	0.2045	0.2047	0.2049	0.12047E-35	0.13110E-34
38	475.0	-160.85	0.03	-160.73	-160.62	0.2050	0.2052	0.2053	-0.70375E-35	0.69700E-35
39	487.5	-160.52	0.02	-160.44	-160.36	0.2054	0.2055	0.2056	-0.23988E-35	0.13908E-35
40	500.0	-160.31	0.01	-160.26	-160.24	0.2057	0.2057	0.2057	-0.30010E-36	-0.17200E-37
41	512.5	-160.23	0.00	-160.25	-160.30	0.2057	0.2057	0.2057	0.63055E-37	-0.96989E-37
42	525.0	-160.38	-0.02	-160.50	-160.66	0.2056	0.2054	0.2052	0.39421E-37	-0.29526E-37
43	537.5	-160.87	-0.06	-161.13	-161.47	0.2050	0.2047	0.2043	0.82953E-38	-0.31040E-38
44	550.0	-161.89	-0.11	-162.40	-163.04	0.2038	0.2032	0.2024	0.95608E-40	0.83049E-39
45	562.5	-163.78	-0.19	-164.74	-165.92	0.2016	0.2005	0.1992	-0.46400E-39	0.40902E-39
46	575.0	-167.18	-0.30	-169.03	-171.38	0.1977	0.1957	0.1932	-0.13058E-39	0.65355E-40
47	587.5	-173.28	-0.32	-177.51	-183.31	0.1912	0.1869	0.1814	-0.73345E-41	-0.36348E-41
48	600.0	-184.35	0.83	-222.57	-299.22	0.1804	0.1521	0.1209	0.49587E-41	-0.14286E-41
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE.................. 0.000
DRAINAGE RATE...................... 0.000

MOISTURE ADDED TO PROFILE............ 88.194
MOISTURE INCREASE IN PROFILE......... 44.507

**********NORMAL TERMINATION AT TIME = 330.05489 DAYS AND STEP NUMBER = 766

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: B

```
#################################################################
#                                                               #
#       ONE-DIMENSIONAL UNSATURATED TRANSPORT                   #
#                                                               #
#    SUMAT43    data source: PRZM OUTPUT                        #
#    TRY  NODE WIDTH= 12.5,     TMAX: 330   FOR  HIGH  YEAR     #
#    2,4-D,    HIGH RAINFALL,   CN: B                           #
#                                                               #
#################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

##########################################################################################
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ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	329.9781	7919.4750	0.4752E+06	0.5000E+00	763	1	2038

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-335.58	1.01	-331.61	-328.06	0.0683	0.0688	0.0693	0.87994E-16	0.00000E+00
2	12.5	-324.83	0.74	-321.88	-319.16	0.0698	0.0702	0.0706	0.47555E-15	0.80493E-17
3	25.0	-316.62	0.59	-314.21	-311.91	0.0710	0.0714	0.0718	0.36625E-15	0.20730E-16
4	37.5	-309.68	0.53	-307.49	-305.33	0.0722	0.0726	0.0729	0.35874E-15	-0.13355E-16
5	50.0	-303.21	0.50	-300.59	-297.20	0.0733	0.0895	0.1197	0.30054E-15	-0.16058E-17
6	62.5	-293.50	0.89	-289.79	-286.08	0.1368	0.1380	0.1393	0.33199E-15	0.13846E-17
7	75.0	-282.36	0.89	-278.64	-274.91	0.1407	0.1420	0.1435	0.26665E-15	-0.10415E-16
8	87.5	-271.19	0.90	-267.45	-263.71	0.1449	0.1464	0.1480	0.11135E-15	-0.12509E-16
9	100.0	-259.97	0.90	-256.21	-252.45	0.1496	0.1512	0.1529	0.12726E-16	-0.31665E-17
10	112.5	-248.68	0.91	-244.90	-241.11	0.1547	0.1565	0.1584	0.25542E-18	0.19616E-19

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: B (Continue)

11	125.0	-237.30	0.91	-233.49	-229.67	0.1603	0.1624	0.1645	-0.39661E-19	-0.26752E-19
12	137.5	-225.83	0.92	-221.98	-218.12	0.1667	0.1689	0.1713	0.26695E-19	-0.48952E-20
13	150.0	-214.26	0.93	-210.36	-206.45	0.1737	0.1763	0.1789	-0.48675E-20	0.22736E-20
14	162.5	-202.59	0.92	-198.62	-194.98	0.1816	0.1803	0.1754	-0.72057E-21	-0.17550E-21
15	175.0	-192.63	0.33	-190.24	-188.35	0.1732	0.1752	0.1769	0.22647E-21	-0.78216E-22
16	200.0	-186.56	0.23	-185.66	-184.82	0.1785	0.1793	0.1800	0.16442E-22	-0.20397E-22
17	212.5	-184.01	0.20	-183.21	-182.45	0.1808	0.1815	0.1822	0.83319E-23	0.85716E-24
18	225.0	-181.71	0.18	-180.98	-180.29	0.1829	0.1836	0.1842	-0.24756E-23	0.21073E-23
19	237.5	-179.61	0.16	-178.95	-178.31	0.1849	0.1855	0.1861	-0.62286E-24	0.40834E-24
20	250.0	-177.69	0.15	-177.09	-176.51	0.1868	0.1873	0.1879	-0.10446E-24	0.11659E-25
21	262.5	-175.94	0.13	-175.39	-174.85	0.1885	0.1891	0.1896	0.10787E-25	-0.23872E-25
22	275.0	-174.33	0.12	-173.83	-173.34	0.1901	0.1906	0.1911	0.11004E-25	-0.84534E-26
23	287.5	-172.86	0.11	-172.39	-171.94	0.1916	0.1921	0.1926	0.25529E-26	-0.79792E-27
24	300.0	-171.51	0.10	-171.08	-170.67	0.1931	0.1935	0.1940	-0.57100E-28	0.34993E-27
25	312.5	-170.26	0.10	-169.87	-169.49	0.1944	0.1948	0.1952	-0.18368E-27	0.14083E-27
26	325.0	-169.12	0.09	-168.76	-168.41	0.1956	0.1960	0.1964	-0.41900E-28	0.12563E-28
27	337.5	-168.07	0.08	-167.74	-167.42	0.1968	0.1971	0.1975	0.15772E-29	-0.56056E-29
28	350.0	-167.10	0.07	-166.80	-166.50	0.1978	0.1982	0.1985	0.29243E-29	-0.19287E-29
29	362.5	-166.21	0.07	-165.92	-165.65	0.1988	0.1991	0.1995	0.53227E-30	0.16562E-32
30	375.0	-165.38	0.06	-165.12	-164.87	0.1998	0.2001	0.2003	-0.10047E-30	0.16315E-30
31	387.5	-164.62	0.06	-164.38	-164.14	0.2006	0.2009	0.2012	-0.71727E-31	0.46260E-31
32	400.0	-163.91	0.05	-163.68	-163.47	0.2014	0.2017	0.2019	-0.12543E-31	-0.59907E-34
33	412.5	-163.25	0.05	-163.04	-162.84	0.2022	0.2024	0.2027	0.21661E-32	-0.40625E-32
34	425.0	-162.64	0.05	-162.45	-162.26	0.2029	0.2031	0.2033	0.17699E-32	-0.13897E-32
35	437.5	-162.08	0.04	-161.90	-161.73	0.2036	0.2038	0.2040	0.42170E-33	-0.15263E-33
36	450.0	-161.56	0.04	-161.40	-161.25	0.2042	0.2044	0.2045	0.75893E-35	0.54382E-34
37	462.5	-161.10	0.04	-160.96	-160.82	0.2047	0.2049	0.2050	-0.29747E-34	0.30075E-34
38	475.0	-160.69	0.03	-160.57	-160.46	0.2052	0.2053	0.2055	-0.10591E-34	0.60023E-35
39	487.5	-160.36	0.02	-160.27	-160.20	0.2056	0.2057	0.2058	-0.13035E-35	-0.22080E-36
40	500.0	-160.13	0.01	-160.09	-160.06	0.2059	0.2059	0.2060	0.34339E-36	-0.50884E-36
41	512.5	-160.05	0.00	-160.07	-160.12	0.2060	0.2059	0.2059	0.20637E-36	-0.15176E-36
42	525.0	-160.19	-0.02	-160.31	-160.46	0.2058	0.2057	0.2055	0.43038E-37	-0.13833E-37
43	537.5	-160.67	-0.06	-160.93	-161.26	0.2052	0.2049	0.2045	-0.37597E-39	0.60436E-38
44	550.0	-161.67	-0.11	-162.19	-162.82	0.2040	0.2034	0.2027	-0.30758E-38	0.29173E-38
45	562.5	-163.56	-0.19	-164.51	-165.69	0.2018	0.2007	0.1994	-0.96951E-39	0.54488E-39
46	575.0	-166.95	-0.30	-168.79	-171.14	0.1980	0.1960	0.1934	-0.10463E-39	-0.47942E-41
47	587.5	-173.03	-0.32	-177.26	-183.06	0.1915	0.1872	0.1816	0.26547E-40	-0.28226E-40
48	600.0	-184.07	0.84	-222.34	-299.13	0.1807	0.1523	0.1209	0.11612E-40	-0.32508E-41
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 89.425
MOISTURE INCREASE IN PROFILE......... 44.574

**********NORMAL TERMINATION AT TIME = 330.47813 DAYS AND STEP NUMBER = 764

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: C

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*******************************************************************************
*                                                                             *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                *
*                                                                             *
*    SUMAT43     data source: PRZM OUTPUT                                     *
*    TRY  NODE WIDTH= 12.5,      TMAX: 330   FOR  HIGH  YEAR                  *
*    2,4-D      HIGH RAINFALL     CN: C                                       *
*                                                                             *
*******************************************************************************
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INPUT PARAMETERS
================

```
NUMBER OF NODES......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........   1
KDRAIN........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3...............(WRITE MATERIAL PROPERTIES)..........   4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0
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ELAPSED TIME     DAYS      HOURS       MINUTES        DELT                    ISTEP   NIT   NITT
               330.0384 7920.9219   0.4753E+06   0.5000E+00                    767     1    2038
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-335.69	1.01	-331.71	-328.15	0.0683	0.0688	0.0693	0.86896E-16	0.00000E+00
2	12.5	-324.92	0.74	-321.95	-319.22	0.0698	0.0702	0.0706	0.54181E-15	0.31949E-16
3	25.0	-316.67	0.60	-314.25	-311.94	0.0710	0.0714	0.0718	0.31311E-15	0.38610E-17
4	37.5	-309.71	0.53	-307.52	-305.35	0.0722	0.0725	0.0729	0.45682E-15	-0.17323E-16
5	50.0	-303.23	0.50	-300.60	-297.22	0.0733	0.0895	0.1197	0.29192E-15	0.29131E-17
6	62.5	-293.52	0.89	-289.81	-286.09	0.1368	0.1380	0.1393	0.32895E-15	0.14425E-19
7	75.0	-282.37	0.89	-278.65	-274.93	0.1407	0.1420	0.1434	0.28346E-15	-0.84311E-17
8	87.5	-271.20	0.90	-267.47	-263.73	0.1449	0.1464	0.1479	0.13192E-15	-0.13001E-16
9	100.0	-259.98	0.90	-256.23	-252.47	0.1495	0.1512	0.1529	0.20267E-16	-0.44763E-17
10	112.5	-248.69	0.91	-244.91	-241.12	0.1547	0.1565	0.1584	0.26924E-18	0.74343E-20

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: C (Continue)

11	125.0	-237.32	0.91	-233.51	-229.68	0.1603	0.1624	0.1645	0.14946E-19	-0.51731E-19
12	137.5	-225.85	0.92	-222.00	-218.14	0.1666	0.1689	0.1713	0.21529E-19	0.98369E-21
13	150.0	-214.27	0.93	-210.38	-206.47	0.1737	0.1762	0.1789	-0.62279E-20	0.15431E-20
14	162.5	-202.61	0.92	-198.64	-194.99	0.1816	0.1803	0.1754	-0.36403E-22	-0.47853E-21
15	175.0	-192.64	0.33	-190.26	-188.37	0.1732	0.1752	0.1769	0.18800E-21	-0.52382E-22
16	200.0	-186.57	0.23	-185.67	-184.83	0.1784	0.1792	0.1800	0.22000E-22	-0.38943E-23
17	212.5	-184.02	0.20	-183.22	-182.46	0.1807	0.1815	0.1822	-0.31005E-23	0.89624E-23
18	225.0	-181.71	0.18	-180.99	-180.29	0.1829	0.1836	0.1842	-0.44829E-23	0.22441E-23
19	237.5	-179.61	0.16	-178.95	-178.31	0.1849	0.1855	0.1861	-0.36018E-24	-0.27107E-25
20	250.0	-177.69	0.15	-177.09	-176.50	0.1868	0.1873	0.1879	0.82998E-25	-0.12336E-24
21	262.5	-175.94	0.13	-175.38	-174.85	0.1885	0.1891	0.1896	0.49126E-25	-0.33424E-25
22	275.0	-174.32	0.12	-173.82	-173.33	0.1901	0.1907	0.1912	0.93447E-26	-0.14203E-26
23	287.5	-172.85	0.11	-172.38	-171.93	0.1917	0.1921	0.1926	-0.93658E-27	0.21317E-26
24	300.0	-171.49	0.10	-171.06	-170.65	0.1931	0.1935	0.1940	-0.10010E-26	0.72230E-27
25	312.5	-170.24	0.10	-169.85	-169.47	0.1944	0.1948	0.1952	-0.20961E-27	0.42009E-28
26	325.0	-169.09	0.09	-168.73	-168.38	0.1956	0.1960	0.1964	0.17062E-28	-0.41272E-28
27	337.5	-168.04	0.08	-167.70	-167.38	0.1968	0.1972	0.1975	0.19837E-28	-0.13825E-28
28	350.0	-167.06	0.07	-166.75	-166.45	0.1979	0.1982	0.1986	0.39359E-29	-0.55556E-30
29	362.5	-166.16	0.07	-165.88	-165.60	0.1989	0.1992	0.1995	-0.42630E-30	0.91415E-30
30	375.0	-165.33	0.06	-165.06	-164.81	0.1998	0.2001	0.2004	-0.42442E-30	0.30494E-30
31	387.5	-164.55	0.06	-164.31	-164.07	0.2007	0.2010	0.2012	-0.89408E-31	0.16460E-31
32	400.0	-163.84	0.06	-163.61	-163.39	0.2015	0.2018	0.2020	0.69267E-32	-0.19666E-31
33	412.5	-163.17	0.05	-162.96	-162.76	0.2023	0.2025	0.2028	0.92693E-32	-0.76185E-32
34	425.0	-162.56	0.05	-162.36	-162.17	0.2030	0.2032	0.2035	0.24240E-32	-0.94015E-33
35	437.5	-161.98	0.04	-161.80	-161.63	0.2037	0.2039	0.2041	0.70135E-34	0.27666E-33
36	450.0	-161.46	0.04	-161.29	-161.14	0.2043	0.2045	0.2047	-0.15740E-33	0.16175E-33
37	462.5	-160.98	0.04	-160.84	-160.70	0.2049	0.2050	0.2052	-0.57451E-34	0.33236E-34
38	475.0	-160.57	0.03	-160.44	-160.33	0.2053	0.2055	0.2056	-0.73858E-35	-0.90284E-36
39	487.5	-160.23	0.02	-160.13	-160.05	0.2058	0.2059	0.2060	0.17622E-35	-0.27060E-35
40	500.0	-159.99	0.01	-159.94	-159.91	0.2060	0.2061	0.2061	0.11065E-35	-0.82514E-36
41	512.5	-159.90	0.00	-159.91	-159.95	0.2061	0.2061	0.2061	0.23662E-36	-0.80823E-37
42	525.0	-160.02	-0.02	-160.13	-160.29	0.2060	0.2059	0.2057	0.28073E-39	0.30277E-37
43	537.5	-160.49	-0.05	-160.75	-161.08	0.2054	0.2051	0.2047	-0.15842E-37	0.15267E-37
44	550.0	-161.48	-0.11	-161.99	-162.62	0.2043	0.2037	0.2029	-0.50830E-38	0.29863E-38
45	562.5	-163.36	-0.19	-164.30	-165.48	0.2021	0.2010	0.1996	-0.61214E-39	0.30021E-40
46	575.0	-166.73	-0.30	-168.57	-170.92	0.1982	0.1962	0.1937	0.10604E-39	-0.14151E-39
47	587.5	-172.80	-0.32	-177.02	-182.82	0.1917	0.1874	0.1818	0.57786E-40	-0.34495E-40
48	600.0	-183.82	0.85	-222.12	-299.05	0.1809	0.1524	0.1209	0.51480E-41	-0.11462E-41
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000

DRAINAGE RATE..................... 0.000

MOISTURE ADDED TO PROFILE............ 91.178

MOISTURE INCREASE IN PROFILE......... 44.613

**********NORMAL TERMINATION AT TIME = 330.03841 DAYS AND STEP NUMBER = 767

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Average Rainfall Year And CN: A

```
################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#    SUMA143    data source: PRZM OUTPUT                                       #
#    TRY  NODE WIDTH= 12.5,      TMAX:  320    FOR  AVG.  YEAR                 #
#    2,4-D,     CN: A                                                          #
#                                                                              #
################################################################################
```

INPUT PARAMETERS
================

```
NUMBER OF NODES......................(NN)...............   45
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 80.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
```

2-4D-AV-A ##

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	319.8828	7677.1882	0.4606E+06	0.5000E+00	747	1	1880

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-300.77	1.00	-296.94	-293.70	0.0738	0.0745	0.0751	0.32774E-13	0.00000E+00
2	12.5	-290.93	0.62	-288.67	-286.90	0.0757	0.0761	0.0765	0.17971E-12	0.88381E-13
3	25.0	-285.49	0.31	-284.49	-283.97	0.0768	0.0770	0.0771	0.71316E-12	-0.11913E-12
4	37.5	-283.84	-0.01	-284.07	-284.78	0.0772	0.0771	0.0770	-0.34186E-13	0.22090E-13
5	50.0	-286.11	-0.40	-286.43	-284.76	0.0767	0.0928	0.1235	-0.53379E-14	-0.16590E-14
6	62.5	-282.17	0.64	-279.49	-276.81	0.1407	0.1417	0.1427	0.30499E-14	-0.15634E-14
7	75.0	-274.12	0.65	-271.41	-268.67	0.1438	0.1448	0.1459	0.98949E-16	0.30915E-15
8	87.5	-265.90	0.67	-263.10	-260.24	0.1470	0.1482	0.1494	-0.21069E-15	0.25101E-16
9	100.0	-257.34	0.70	-254.39	-251.38	0.1507	0.1520	0.1534	0.34877E-16	-0.30475E-16
10	112.5	-248.31	0.74	-245.18	-241.99	0.1549	0.1564	0.1579	0.98324E-17	-0.12285E-17
11	125.0	-238.74	0.79	-235.42	-232.05	0.1596	0.1613	0.1632	-0.15177E-17	0.19527E-17
12	137.5	-228.62	0.83	-225.13	-221.59	0.1651	0.1671	0.1692	-0.80327E-18	0.32860E-18

PRZM+FEM Output Of Pesticide Concentration For 2,4-D
Under Average Rainfall Year And CN: A (Continue)

13	150.0	-218.00	0.86	-214.35	-210.64	0.1713	0.1737	0.1761	-0.12566E-19	-0.75521E-19
14	162.5	-206.97	0.87	-203.12	-199.74	0.1785	0.1770	0.1717	0.47005E-19	-0.30061E-19
15	175.0	-198.21	0.03	-198.30	-198.70	0.1687	0.1687	0.1684	0.60166E-20	-0.16856E-20
16	200.0	-198.76	0.04	-198.61	-198.47	0.1683	0.1684	0.1685	0.10861E-20	-0.12435E-21
17	212.5	-198.26	0.06	-197.99	-197.69	0.1687	0.1689	0.1691	-0.11351E-21	0.62607E-21
18	225.0	-197.35	0.09	-196.97	-196.57	0.1694	0.1697	0.1700	-0.31381E-21	0.24733E-21
19	237.5	-196.15	0.10	-195.71	-195.25	0.1704	0.1707	0.1711	-0.72884E-22	0.31907E-22
20	250.0	-194.77	0.12	-194.29	-193.80	0.1715	0.1719	0.1723	-0.34094E-23	-0.46645E-23
21	262.5	-193.30	0.12	-192.79	-192.28	0.1727	0.1731	0.1735	0.30809E-23	-0.31512E-23
22	275.0	-191.77	0.12	-191.25	-190.74	0.1740	0.1744	0.1748	0.10954E-23	-0.65226E-24
23	287.5	-190.23	0.12	-189.72	-189.21	0.1753	0.1757	0.1761	0.14666E-24	-0.52281E-26
24	300.0	-188.71	0.12	-188.21	-187.72	0.1766	0.1770	0.1774	-0.21582E-25	0.41226E-25
25	312.5	-187.23	0.12	-186.74	-186.27	0.1779	0.1783	0.1787	-0.16903E-25	0.15128E-25
26	325.0	-185.79	0.11	-185.33	-184.87	0.1791	0.1796	0.1800	-0.47281E-26	0.29028E-26
27	337.5	-184.42	0.11	-183.97	-183.53	0.1804	0.1808	0.1812	-0.67778E-27	0.10307E-27
28	350.0	-183.10	0.10	-182.67	-182.25	0.1816	0.1820	0.1824	0.51405E-28	-0.15950E-27
29	362.5	-181.84	0.10	-181.44	-181.04	0.1828	0.1831	0.1835	0.68211E-28	-0.73111E-28
30	375.0	-180.65	0.09	-180.26	-179.88	0.1839	0.1843	0.1846	0.24891E-28	-0.18929E-28
31	387.5	-179.51	0.09	-179.15	-178.79	0.1850	0.1853	0.1857	0.54630E-29	-0.24261E-29
32	400.0	-178.45	0.08	-178.11	-177.78	0.1860	0.1863	0.1867	0.39417E-30	0.47921E-30
33	412.5	-177.46	0.08	-177.15	-176.85	0.1870	0.1873	0.1876	-0.28552E-30	0.41040E-30
34	425.0	-176.57	0.07	-176.30	-176.04	0.1879	0.1881	0.1884	-0.15426E-30	0.13693E-30
35	437.5	-175.80	0.06	-175.57	-175.37	0.1886	0.1889	0.1891	-0.44772E-31	0.24839E-31
36	450.0	-175.18	0.04	-175.02	-174.89	0.1893	0.1894	0.1896	-0.58878E-32	-0.16369E-32
37	462.5	-174.79	0.02	-174.72	-174.70	0.1897	0.1897	0.1898	0.15765E-32	-0.30730E-32
38	475.0	-174.72	-0.01	-174.79	-174.93	0.1897	0.1897	0.1895	0.12257E-32	-0.12405E-32
39	487.5	-175.13	-0.06	-175.42	-175.81	0.1893	0.1890	0.1886	0.41084E-33	-0.29571E-33
40	500.0	-176.31	-0.13	-176.95	-177.75	0.1881	0.1875	0.1867	0.82520E-34	-0.28969E-34
41	512.5	-178.74	-0.26	-180.00	-181.57	0.1857	0.1845	0.1830	0.24614E-35	0.11924E-34
42	525.0	-183.43	-0.48	-185.94	-189.19	0.1813	0.1790	0.1761	-0.57813E-35	0.78953E-35
43	537.5	-192.74	-0.85	-198.69	-207.18	0.1731	0.1684	0.1621	-0.28683E-35	0.26457E-35
44	550.0	-214.82	-1.46	-249.99	-308.15	0.1569	0.1381	0.1185	-0.83564E-36	0.57168E-36
45	562.5	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 52.320
MOISTURE INCREASE IN PROFILE......... 34.056

**********NORMAL TERMINATION AT TIME = 320.38284 DAYS AND STEP NUMBER = 748

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Average Rainfall Year And CN: B

```
********************************************************************************
*                                                                              *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 *
*                                                                              *
*    SUMAT43    data source: PRZM OUTPUT                                       *
*    TRY  NODE WIDTH= 12.5,     TMAX:  320   FOR  AVG.  YEAR                   *
*    2,4-D,     CN: B                                                          *
*                                                                              *
********************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  80.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..........................(RAINFALL CODE)..........   1
KDRAIN.........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3...............(WRITE MATERIAL PROPERTIES)..........   4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0


24D-AV-B  ******************************************************************************************

ELAPSED TIME     DAYS      HOURS       MINUTES       DELT                              ISTEP    NIT   NITT
              320.0572 7681.3723    0.4609E+06    0.5000E+00                             750      1   1895

                    ---------PRESSURE HEAD--------       ---MOISTURE CONTENT---     --------CONCENTRATION---------
NODE    DEPTH     FUNCTN     GRAD   F(1/3)  F(2/3)      FUNCTN  F(1/3)  F(2/3)    CONCENTRATION        GRADIENT
  1      0.0     -301.73     1.00 -297.88 -294.62       0.0736  0.0743  0.0749     0.30519E-13      0.00000E+00
  2     12.5     -291.87     0.61 -289.60 -287.78       0.0755  0.0759  0.0763     0.18048E-12      0.87982E-13
  3     25.0     -286.37     0.29 -285.36 -284.76       0.0766  0.0768  0.0770     0.73230E-12     -0.11415E-12
  4     37.5     -284.60    -0.01 -284.81 -285.44       0.0770  0.0769  0.0768    -0.32187E-13      0.21309E-13
  5     50.0     -286.69    -0.39 -286.95 -285.22       0.0765  0.0927  0.1234    -0.63548E-14     -0.15911E-14
  6     62.5     -282.60     0.65 -279.89 -277.18       0.1406  0.1416  0.1426     0.34673E-14     -0.17324E-14
  7     75.0     -274.46     0.65 -271.72 -268.96       0.1436  0.1447  0.1458     0.47620E-16      0.38000E-15
  8     87.5     -266.16     0.68 -263.33 -260.45       0.1469  0.1481  0.1493    -0.22987E-15      0.15596E-16
  9    100.0     -257.52     0.71 -254.54 -251.51       0.1506  0.1520  0.1533     0.44489E-16     -0.34964E-16
```

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Average Rainfall Year And CN: B (Continue)

10	112.5	-248.42	0.75	-245.27	-242.07	0.1548	0.1563	0.1579	0.10135E-16	-0.45156E-18
11	125.0	-238.80	0.79	-235.47	-232.09	0.1596	0.1613	0.1631	-0.20783E-17	0.22509E-17
12	137.5	-228.65	0.83	-225.15	-221.59	0.1650	0.1671	0.1692	-0.85344E-18	0.28874E-18
13	150.0	-218.00	0.86	-214.34	-210.62	0.1713	0.1737	0.1761	0.22469E-19	-0.10329E-18
14	162.5	-206.95	0.87	-203.11	-199.72	0.1786	0.1770	0.1718	0.54925E-19	-0.31899E-19
15	175.0	-198.18	0.04	-198.24	-198.62	0.1688	0.1687	0.1684	0.50109E-20	-0.12147E-20
16	200.0	-198.68	0.04	-198.54	-198.40	0.1684	0.1685	0.1686	0.12326E-20	0.14325E-21
17	212.5	-198.20	0.06	-197.93	-197.63	0.1688	0.1690	0.1692	-0.30978E-21	0.78775E-21
18	225.0	-197.29	0.09	-196.92	-196.52	0.1695	0.1698	0.1701	-0.36345E-21	0.26177E-21
19	237.5	-196.10	0.10	-195.66	-195.20	0.1704	0.1708	0.1711	-0.71731E-22	0.24472E-22
20	250.0	-194.73	0.11	-194.25	-193.75	0.1715	0.1719	0.1723	0.24494E-24	-0.80282E-23
21	262.5	-193.25	0.12	-192.75	-192.24	0.1727	0.1731	0.1736	0.41825E-23	-0.37556E-23
22	275.0	-191.73	0.12	-191.21	-190.70	0.1740	0.1744	0.1749	0.12146E-23	-0.63046E-24
23	287.5	-190.19	0.12	-189.68	-189.17	0.1753	0.1757	0.1762	0.11423E-24	0.40705E-25
24	300.0	-188.67	0.12	-188.17	-187.67	0.1766	0.1770	0.1775	-0.39817E-25	0.54583E-25
25	312.5	-187.18	0.12	-186.69	-186.21	0.1779	0.1783	0.1788	-0.20709E-25	0.16350E-25
26	325.0	-185.74	0.11	-185.27	-184.81	0.1792	0.1796	0.1800	-0.47332E-26	0.23379E-26
27	337.5	-184.35	0.11	-183.90	-183.46	0.1804	0.1809	0.1813	-0.39640E-27	-0.20237E-27
28	350.0	-183.02	0.10	-182.59	-182.16	0.1817	0.1821	0.1825	0.15818E-27	-0.23457E-27
29	362.5	-181.74	0.10	-181.32	-180.91	0.1829	0.1833	0.1836	0.88494E-28	-0.79654E-28
30	375.0	-180.51	0.10	-180.11	-179.72	0.1840	0.1844	0.1848	0.24956E-28	-0.15985E-28
31	387.5	-179.33	0.09	-178.95	-178.57	0.1852	0.1855	0.1859	0.40101E-29	-0.79678E-30
32	400.0	-178.20	0.09	-177.84	-177.48	0.1863	0.1866	0.1870	-0.17381E-30	0.89381E-30
33	412.5	-177.12	0.08	-176.77	-176.42	0.1873	0.1877	0.1880	-0.40499E-30	0.45595E-30
34	425.0	-176.09	0.08	-175.75	-175.42	0.1883	0.1887	0.1890	-0.15885E-30	0.12192E-30
35	437.5	-175.10	0.08	-174.78	-174.47	0.1893	0.1897	0.1900	-0.36757E-31	0.14945E-31
36	450.0	-174.17	0.07	-173.87	-173.59	0.1903	0.1906	0.1909	-0.23523E-32	-0.45386E-32
37	462.5	-173.30	0.07	-173.03	-172.77	0.1912	0.1915	0.1917	0.24677E-32	-0.35145E-32
38	475.0	-172.51	0.06	-172.27	-172.03	0.1920	0.1923	0.1925	0.13188E-32	-0.11815E-32
39	487.5	-171.81	0.05	-171.61	-171.42	0.1927	0.1930	0.1932	0.37245E-33	-0.22663E-33
40	500.0	-171.24	0.04	-171.09	-170.96	0.1933	0.1935	0.1936	0.55862E-34	-0.16808E-35
41	512.5	-170.85	0.02	-170.77	-170.73	0.1938	0.1938	0.1939	-0.65142E-35	0.18821E-34
42	525.0	-170.71	0.00	-170.74	-170.82	0.1939	0.1939	0.1938	-0.77552E-35	0.88164E-35
43	537.5	-170.96	-0.04	-171.16	-171.43	0.1936	0.1934	0.1931	-0.30214E-35	0.25002E-35
44	550.0	-171.79	-0.10	-172.25	-172.85	0.1928	0.1923	0.1917	-0.74813E-36	0.42127E-36
45	562.5	-173.56	-0.19	-174.49	-175.66	0.1909	0.1900	0.1888	-0.93481E-37	-0.11421E-37
46	575.0	-176.94	-0.31	-178.79	-181.16	0.1875	0.1857	0.1834	0.18221E-37	-0.38881E-37
47	587.5	-183.17	-0.37	-187.41	-193.22	0.1815	0.1777	0.1727	0.16621E-37	-0.15890E-37
48	600.0	-194.81	0.59	-231.23	-302.38	0.1714	0.1472	0.1200	0.67879E-38	-0.20325E-38
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 52.777
MOISTURE INCREASE IN PROFILE......... 39.014

**********NORMAL TERMINATION AT TIME = 320.05718 DAYS AND STEP NUMBER = 750

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Average Rainfall Year And CN: C

```
################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#     SUMAT43    data source: PRZM OUTPUT                                      #
#     TRY  NODE WIDTH= 12.5,     TMAX:  320   FOR  AVG.  YEAR                  #
#     2,4-D      CN: C                                                         #
#                                                                              #
################################################################################

INPUT PARAMETERS
================
NUMBER OF NODES.......................(NN)................   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS).............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  80.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1.............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3..............(WRITE MATERIAL PROPERTIES)..........    4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0


24D-AV-C  ###########################################################################

ELAPSED TIME     DAYS      HOURS       MINUTES       DELT                      ISTEP    NIT   NITT
              319.8916 7677.3979    0.4606E+06   0.5000E+00                     748      1   1895
```

NODE	DEPTH	PRESSURE HEAD FUNCTN	GRAD	F(1/3)	F(2/3)	MOISTURE CONTENT FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-300.67	1.00	-296.84	-293.60	0.0738	0.0745	0.0751	0.41757E-13	0.00000E+00
2	12.5	-290.83	0.62	-288.56	-286.79	0.0757	0.0761	0.0765	0.14101E-12	0.82003E-13
3	25.0	-285.38	0.31	-284.37	-283.83	0.0768	0.0770	0.0772	0.82508E-12	-0.11471E-12
4	37.5	-283.69	-0.01	-283.92	-284.61	0.0772	0.0771	0.0770	-0.35938E-13	0.21042E-13
5	50.0	-285.92	-0.40	-286.24	-284.55	0.0767	0.0929	0.1236	-0.40495E-14	-0.33092E-14
6	62.5	-281.96	0.64	-279.27	-276.59	0.1408	0.1418	0.1428	0.37981E-14	-0.15415E-14
7	75.0	-273.90	0.65	-271.19	-268.45	0.1438	0.1449	0.1460	-0.21893E-15	0.47180E-15
8	87.5	-265.68	0.67	-262.87	-260.01	0.1471	0.1483	0.1495	-0.20578E-15	-0.22990E-16
9	100.0	-257.11	0.70	-254.15	-251.14	0.1508	0.1521	0.1535	0.60701E-16	-0.36762E-16
10	112.5	-248.07	0.74	-244.94	-241.75	0.1550	0.1565	0.1581	0.72859E-17	0.27137E-17

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Average Rainfall Year And CN: C (Continue)

11	125.0	-238.50	0.79	-235.18	-231.81	0.1597	0.1615	0.1633	-0.33342E-17	0.26414E-17
12	137.5	-228.38	0.83	-224.89	-221.35	0.1652	0.1672	0.1693	-0.79837E-18	0.12010E-18
13	150.0	-217.76	0.86	-214.11	-210.40	0.1715	0.1738	0.1762	0.11101E-18	-0.15033E-18
14	162.5	-206.73	0.87	-202.88	-199.50	0.1787	0.1772	0.1719	0.61616E-19	-0.27274E-19
15	175.0	-197.97	0.03	-198.06	-198.45	0.1689	0.1689	0.1685	0.16641E-21	0.69425E-21
16	200.0	-198.51	0.04	-198.37	-198.22	0.1685	0.1686	0.1687	0.13393E-20	0.96858E-21
17	212.5	-198.02	0.06	-197.75	-197.44	0.1689	0.1691	0.1693	-0.83150E-21	0.11043E-20
18	225.0	-197.10	0.09	-196.72	-196.32	0.1696	0.1699	0.1702	-0.43576E-21	0.25040E-21
19	237.5	-195.90	0.10	-195.45	-194.99	0.1706	0.1709	0.1713	-0.52712E-22	-0.18655E-23
20	250.0	-194.51	0.12	-194.03	-193.53	0.1717	0.1721	0.1725	0.10702E-22	-0.15334E-22
21	262.5	-193.03	0.12	-192.52	-192.00	0.1729	0.1733	0.1738	0.61541E-23	-0.42782E-23
22	275.0	-191.49	0.12	-190.97	-190.46	0.1742	0.1746	0.1751	0.11395E-23	-0.30649E-24
23	287.5	-189.94	0.12	-189.43	-188.92	0.1755	0.1759	0.1764	-0.40997E-25	0.18057E-24
24	300.0	-188.41	0.12	-187.91	-187.41	0.1768	0.1773	0.1777	-0.85336E-25	0.78614E-25
25	312.5	-186.92	0.12	-186.43	-185.95	0.1781	0.1786	0.1790	-0.25343E-25	0.14771E-25
26	325.0	-185.48	0.11	-185.01	-184.54	0.1794	0.1798	0.1803	-0.31739E-26	0.73803E-28
27	337.5	-184.08	0.11	-183.63	-183.18	0.1807	0.1811	0.1815	0.48525E-27	-0.91205E-27
28	350.0	-182.74	0.10	-182.31	-181.88	0.1819	0.1823	0.1827	0.37050E-27	-0.33559E-27
29	362.5	-181.46	0.10	-181.04	-180.63	0.1831	0.1835	0.1839	0.10506E-27	-0.66559E-28
30	375.0	-180.22	0.10	-179.82	-179.43	0.1843	0.1847	0.1851	0.15972E-28	-0.35324E-29
31	387.5	-179.04	0.09	-178.66	-178.28	0.1854	0.1858	0.1862	-0.70184E-30	0.31197E-29
32	400.0	-177.90	0.09	-177.53	-177.17	0.1865	0.1869	0.1873	-0.13786E-29	0.15182E-29
33	412.5	-176.81	0.09	-176.46	-176.11	0.1876	0.1880	0.1883	-0.52952E-30	0.40071E-30
34	425.0	-175.77	0.08	-175.44	-175.10	0.1887	0.1890	0.1893	-0.11510E-30	0.48051E-31
35	437.5	-174.78	0.08	-174.46	-174.15	0.1897	0.1900	0.1903	-0.80800E-32	-0.12534E-31
36	450.0	-173.84	0.07	-173.54	-173.25	0.1906	0.1909	0.1912	0.66163E-32	-0.10524E-31
37	462.5	-172.97	0.07	-172.69	-172.42	0.1915	0.1918	0.1921	0.40597E-32	-0.38675E-32
38	475.0	-172.16	0.06	-171.92	-171.68	0.1924	0.1926	0.1929	0.12691E-32	-0.83278E-33
39	487.5	-171.46	0.05	-171.25	-171.06	0.1931	0.1933	0.1935	0.21668E-33	-0.40611E-34
40	500.0	-170.88	0.04	-170.72	-170.59	0.1937	0.1939	0.1940	-0.95454E-35	0.52780E-34
41	512.5	-170.48	0.02	-170.39	-170.34	0.1942	0.1942	0.1943	-0.22976E-34	0.27957E-34
42	525.0	-170.33	0.00	-170.35	-170.43	0.1943	0.1943	0.1942	-0.97966E-35	0.84171E-35
43	537.5	-170.56	-0.04	-170.75	-171.02	0.1941	0.1939	0.1936	-0.25772E-35	0.15415E-35
44	550.0	-171.37	-0.10	-171.84	-172.42	0.1932	0.1927	0.1921	-0.37100E-36	0.57334E-38
45	562.5	-173.13	-0.18	-174.06	-175.22	0.1914	0.1904	0.1892	0.45896E-37	-0.12690E-36
46	575.0	-176.49	-0.31	-178.33	-180.70	0.1879	0.1861	0.1838	0.52287E-37	-0.59063E-37
47	587.5	-182.70	-0.37	-186.94	-192.74	0.1820	0.1781	0.1731	0.20891E-37	-0.16332E-37
48	600.0	-194.30	0.60	-230.80	-302.23	0.1719	0.1475	0.1200	0.54397E-38	-0.15800E-38
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 53.363
MOISTURE INCREASE IN PROFILE......... 39.173

**********NORMAL TERMINATION AT TIME = 320.39158 DAYS AND STEP NUMBER = 749

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Low Rainfall Year And CN: A

```
*****************************************************************************
*                                                                           *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                              *
*                                                                           *
*    SUMAT43     data source: PRZM OUTPUT                                   *
*********   TRY  NODE WIDTH= 12.5,      TMAX:  265    FOR    LOW   YEAR     *
*           2,4-D       LOW RAINFALL       CN: A                            *
*                                                                           *
*****************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN..........................(RAINFALL CODE)..........    1
KDRAIN.........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0


24D-LO-A  *************************************************************************************

ELAPSED TIME      DAYS      HOURS        MINUTES        DELT                        ISTEP    NIT   NITT
               265.0360 6360.8631     0.3817E+06    0.5000E+00                       627      1    1188
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-390.25	1.00	-386.17	-382.22	0.0624	0.0627	0.0631	0.37616E-15	0.00000E+00
2	12.5	-378.41	0.90	-374.71	-371.12	0.0634	0.0638	0.0641	0.34648E-15	-0.83826E-17
3	25.0	-367.61	0.83	-364.18	-360.82	0.0645	0.0649	0.0652	0.28176E-16	-0.11331E-16
4	37.5	-357.51	0.79	-354.26	-351.04	0.0656	0.0660	0.0663	0.27755E-17	-0.49241E-18
5	50.0	-347.87	0.76	-344.44	-340.62	0.0667	0.0815	0.1090	-0.43909E-18	0.37461E-19
6	62.5	-336.66	0.95	-332.72	-328.77	0.1244	0.1254	0.1264	0.16280E-18	-0.56243E-19
7	75.0	-324.84	0.94	-320.92	-317.00	0.1274	0.1285	0.1296	0.22193E-19	-0.35281E-20
8	87.5	-313.09	0.94	-309.19	-305.28	0.1307	0.1318	0.1330	0.16870E-21	0.35696E-21
9	100.0	-301.38	0.94	-297.47	-293.57	0.1342	0.1355	0.1368	-0.98282E-22	-0.86034E-22
10	112.5	-289.66	0.94	-285.76	-281.85	0.1381	0.1395	0.1409	0.15690E-22	0.26235E-22

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Low Rainfall Year And CN: A (Continue)

11	125.0	-277.93	0.94	-274.01	-270.09	0.1423	0.1438	0.1453	-0.30004E-22	0.30701E-22
12	137.5	-266.16	0.94	-262.22	-258.28	0.1469	0.1486	0.1503	-0.11536E-22	0.48820E-23
13	150.0	-254.34	0.94	-250.38	-246.40	0.1520	0.1539	0.1558	0.12820E-25	-0.15266E-23
14	162.5	-242.49	0.93	-238.45	-234.72	0.1577	0.1555	0.1496	0.98952E-24	-0.74717E-24
15	175.0	-232.26	0.36	-229.79	-228.03	0.1467	0.1480	0.1490	0.26643E-24	-0.87589E-25
16	200.0	-226.35	0.22	-225.49	-224.73	0.1499	0.1504	0.1509	0.52871E-27	-0.30839E-25
17	212.5	-223.98	0.18	-223.26	-222.57	0.1513	0.1517	0.1521	0.19999E-25	-0.28201E-26
18	225.0	-221.91	0.16	-221.27	-220.66	0.1525	0.1529	0.1533	-0.20046E-26	0.41169E-26
19	237.5	-220.08	0.14	-219.51	-218.98	0.1536	0.1540	0.1543	-0.17237E-26	0.15422E-26
20	250.0	-218.46	0.12	-217.97	-217.50	0.1546	0.1549	0.1552	-0.49058E-27	0.27080E-27
21	262.5	-217.04	0.11	-216.61	-216.20	0.1555	0.1558	0.1561	-0.56274E-28	-0.11818E-28
22	275.0	-215.81	0.09	-215.43	-215.07	0.1563	0.1565	0.1568	0.14981E-28	-0.23863E-28
23	287.5	-214.73	0.08	-214.41	-214.11	0.1570	0.1572	0.1574	0.95788E-29	-0.78656E-29
24	300.0	-213.82	0.07	-213.55	-213.29	0.1576	0.1578	0.1579	0.24335E-29	-0.11433E-29
25	312.5	-213.05	0.06	-212.83	-212.62	0.1581	0.1582	0.1584	0.19155E-30	0.17453E-30
26	325.0	-212.43	0.04	-212.26	-212.10	0.1585	0.1586	0.1587	-0.11413E-30	0.16077E-30
27	337.5	-211.97	0.03	-211.85	-211.74	0.1588	0.1589	0.1590	-0.59936E-31	0.52874E-31
28	350.0	-211.66	0.02	-211.60	-211.56	0.1590	0.1591	0.1591	-0.16071E-31	0.10352E-31
29	362.5	-211.54	0.00	-211.55	-211.57	0.1591	0.1591	0.1591	-0.24580E-32	0.68635E-33
30	375.0	-211.63	-0.02	-211.71	-211.83	0.1590	0.1590	0.1589	0.45971E-34	-0.39464E-33
31	387.5	-211.97	-0.04	-212.15	-212.37	0.1588	0.1587	0.1585	0.17596E-33	-0.21017E-33
32	400.0	-212.63	-0.07	-212.93	-213.27	0.1584	0.1582	0.1579	0.70748E-34	-0.64523E-34
33	412.5	-213.67	-0.10	-214.12	-214.63	0.1577	0.1574	0.1571	0.19097E-34	-0.14823E-34
34	425.0	-215.21	-0.15	-215.85	-216.57	0.1567	0.1563	0.1558	0.39370E-35	-0.25792E-35
35	437.5	-217.38	-0.20	-218.27	-219.27	0.1553	0.1547	0.1541	0.58895E-36	-0.26790E-36
36	450.0	-220.38	-0.28	-221.60	-222.96	0.1535	0.1527	0.1519	0.33724E-37	0.26686E-37
37	462.5	-224.46	-0.38	-226.12	-227.96	0.1510	0.1501	0.1490	-0.17177E-37	0.25764E-37
38	475.0	-229.99	-0.51	-232.24	-234.72	0.1479	0.1467	0.1454	-0.90852E-38	0.96696E-38
39	487.5	-237.47	-0.69	-240.51	-243.87	0.1440	0.1425	0.1409	-0.29891E-38	0.28466E-38
40	500.0	-247.58	-0.93	-251.67	-256.17	0.1391	0.1373	0.1354	-0.82358E-39	0.75394E-39
41	512.5	-261.11	-1.24	-266.50	-272.34	0.1334	0.1313	0.1292	-0.21147E-39	0.19300E-39
42	525.0	-278.60	-1.55	-285.22	-292.08	0.1271	0.1249	0.1229	-0.53788E-40	0.49688E-40
43	537.5	-299.00	-1.66	-305.77	-312.15	0.1209	0.1191	0.1175	-0.13932E-40	0.13033E-40
44	550.0	-317.91	-1.29	-322.87	-326.98	0.1162	0.1150	0.1141	-0.36852E-41	0.34667E-41
45	562.5	-330.27	-0.69	-332.80	-334.74	0.1135	0.1129	0.1125	-0.98542E-42	0.92546E-42
46	575.0	-336.22	-0.31	-337.36	-338.27	0.1123	0.1120	0.1119	-0.26417E-42	0.24525E-42
47	587.5	-339.03	-0.17	-339.71	-340.34	0.1117	0.1116	0.1115	-0.73197E-43	0.61712E-43
48	600.0	-340.95	-0.15	-342.19	-341.63	0.1113	0.1111	0.1112	-0.24140E-43	0.73216E-44
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................	0.000	MOISTURE ADDED TO PROFILE............	20.448
DRAINAGE RATE....................	0.000	MOISTURE INCREASE IN PROFILE.........	20.330
TOTAL MOISTURE IN PROFILE........	85.215	TOTAL MASS IN SOLUTION...............	0.000

**********NORMAL TERMINATION AT TIME = 265.03596 DAYS AND STEP NUMBER = 627

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Low Rainfall Year And CN: B

```
##############################################################################
#                                                                            #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                               #
#                                                                            #
#    SUMAT43    data source: PRZM OUTPUT                                     #
#########  TRY  NODE WIDTH= 12.5,      TMAX:  265   FOR   LOW  YEAR         #
#          2,4-D     LOW RAINFALL     CN: B                                  #
#                                                                            #
##############################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP..................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0


24D-LO-B  ###################################################################################

ELAPSED TIME    DAYS       HOURS       MINUTES       DELT                     ISTEP   NIT   NITT
              264.9949  6359.8770   0.3816E+06   0.5000E+00                    627     1   1199
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-390.23	1.00	-386.14	-382.20	0.0624	0.0627	0.0631	0.36034E-15	0.00000E+00
2	12.5	-378.39	0.90	-374.69	-371.09	0.0634	0.0638	0.0641	0.37624E-15	-0.68520E-18
3	25.0	-367.59	0.83	-364.16	-360.79	0.0645	0.0649	0.0652	0.37513E-16	-0.21436E-16
4	37.5	-357.49	0.79	-354.23	-351.02	0.0656	0.0660	0.0663	0.25151E-18	0.69311E-18
5	50.0	-347.85	0.76	-344.42	-340.60	0.0667	0.0815	0.1090	-0.65394E-18	0.33334E-18
6	62.5	-336.64	0.95	-332.69	-328.75	0.1244	0.1254	0.1264	-0.69781E-19	-0.23882E-19
7	75.0	-324.82	0.94	-320.89	-316.98	0.1274	0.1285	0.1296	0.10051E-19	-0.38901E-20
8	87.5	-313.07	0.94	-309.16	-305.25	0.1307	0.1319	0.1330	-0.18728E-20	0.17693E-20
9	100.0	-301.35	0.94	-297.45	-293.54	0.1342	0.1355	0.1368	-0.53301E-21	0.10718E-21
10	112.5	-289.64	0.94	-285.73	-281.82	0.1381	0.1395	0.1409	0.63282E-23	-0.12113E-22

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Low Rainfall Year And CN: B (Continue)

11	125.0	-277.91	0.94	-273.99	-270.06	0.1423	0.1438	0.1454	-0.62942E-23	0.14488E-22
12	137.5	-266.13	0.94	-262.20	-258.25	0.1469	0.1486	0.1503	-0.79154E-23	0.50870E-23
13	150.0	-254.31	0.94	-250.35	-246.38	0.1521	0.1539	0.1558	-0.97642E-24	-0.32185E-24
14	162.5	-242.46	0.93	-238.43	-234.70	0.1577	0.1555	0.1496	0.51060E-24	-0.46695E-24
15	175.0	-232.23	0.36	-229.76	-227.99	0.1467	0.1480	0.1490	0.20413E-24	-0.67899E-25
16	200.0	-226.31	0.22	-225.45	-224.68	0.1500	0.1505	0.1509	-0.45205E-26	-0.25542E-25
17	212.5	-223.94	0.18	-223.21	-222.52	0.1513	0.1518	0.1522	0.17385E-25	-0.61431E-26
18	225.0	-221.85	0.16	-221.21	-220.60	0.1526	0.1529	0.1533	-0.34451E-28	0.17747E-26
19	237.5	-220.01	0.14	-219.44	-218.90	0.1537	0.1540	0.1544	-0.88906E-27	0.91786E-27
20	250.0	-218.38	0.12	-217.88	-217.40	0.1547	0.1550	0.1553	-0.31569E-27	0.19970E-27
21	262.5	-216.94	0.11	-216.51	-216.09	0.1556	0.1559	0.1561	-0.48992E-28	0.51762E-29
22	275.0	-215.69	0.09	-215.30	-214.94	0.1564	0.1566	0.1569	0.54783E-29	-0.12415E-28
23	287.5	-214.59	0.08	-214.26	-213.94	0.1571	0.1573	0.1575	0.54419E-29	-0.46792E-29
24	300.0	-213.64	0.07	-213.36	-213.09	0.1577	0.1579	0.1581	0.15167E-29	-0.71822E-30
25	312.5	-212.84	0.06	-212.61	-212.39	0.1582	0.1584	0.1585	0.12868E-30	0.11592E-30
26	325.0	-212.18	0.05	-212.00	-211.82	0.1587	0.1588	0.1589	-0.75514E-31	0.10864E-30
27	337.5	-211.67	0.04	-211.53	-211.41	0.1590	0.1591	0.1592	-0.40847E-31	0.36281E-31
28	350.0	-211.31	0.02	-211.23	-211.16	0.1593	0.1593	0.1594	-0.11113E-31	0.71435E-32
29	362.5	-211.12	0.01	-211.10	-211.10	0.1594	0.1594	0.1594	-0.17037E-32	0.45530E-33
30	375.0	-211.13	-0.01	-211.18	-211.26	0.1594	0.1593	0.1593	0.40713E-34	-0.28770E-33
31	387.5	-211.37	-0.03	-211.51	-211.68	0.1592	0.1591	0.1590	0.12719E-33	-0.15127E-33
32	400.0	-211.90	-0.06	-212.15	-212.44	0.1589	0.1587	0.1585	0.50889E-34	-0.46228E-34
33	412.5	-212.79	-0.09	-213.18	-213.62	0.1583	0.1580	0.1577	0.13663E-34	-0.10534E-34
34	425.0	-214.13	-0.13	-214.70	-215.34	0.1574	0.1570	0.1566	0.27861E-35	-0.17998E-35
35	437.5	-216.05	-0.18	-216.85	-217.74	0.1561	0.1556	0.1551	0.40553E-36	-0.17426E-36
36	450.0	-218.73	-0.25	-219.83	-221.05	0.1545	0.1538	0.1530	0.18543E-37	0.24250E-37
37	462.5	-222.40	-0.34	-223.89	-225.55	0.1522	0.1514	0.1504	-0.13845E-37	0.19625E-37
38	475.0	-227.38	-0.46	-229.41	-231.66	0.1494	0.1482	0.1470	-0.68271E-38	0.71011E-38
39	487.5	-234.14	-0.63	-236.89	-239.93	0.1457	0.1443	0.1428	-0.21815E-38	0.20309E-38
40	500.0	-243.29	-0.85	-247.01	-251.11	0.1411	0.1394	0.1376	-0.58289E-39	0.51903E-39
41	512.5	-255.63	-1.14	-260.59	-266.01	0.1356	0.1336	0.1315	-0.14365E-39	0.12725E-39
42	525.0	-271.89	-1.46	-278.21	-284.90	0.1294	0.1272	0.1250	-0.34901E-40	0.31366E-40
43	537.5	-291.83	-1.68	-298.85	-305.71	0.1230	0.1210	0.1191	-0.86658E-41	0.79213E-41
44	550.0	-312.19	-1.49	-318.02	-323.05	0.1175	0.1161	0.1150	-0.22138E-41	0.20427E-41
45	562.5	-327.23	-0.89	-330.53	-333.11	0.1141	0.1134	0.1129	-0.57542E-42	0.53088E-42
46	575.0	-335.07	-0.41	-336.57	-337.74	0.1125	0.1122	0.1120	-0.15031E-42	0.13713E-42
47	587.5	-338.67	-0.20	-339.47	-340.19	0.1118	0.1116	0.1115	-0.40459E-43	0.33679E-43
48	600.0	-340.85	-0.16	-342.16	-341.62	0.1114	0.1111	0.1112	-0.12996E-43	0.39402E-44
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 20.693
MOISTURE INCREASE IN PROFILE......... 20.596

**********NORMAL TERMINATION AT TIME = 265.49487 DAYS AND STEP NUMBER = 628

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Low Rainfall Year And CN: C

```
###########################################################################
#                                                                         #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                            #
#                                                                         #
#     SUMA143    data source: PRZM OUTPUT                                 #
#########    TRY  NODE WIDTH= 12.5,      TMAX:  265    FOR   LOW   YEAR   #
#           2,4-D      LOW RAINFALL      CN: C                            #
#                                                                         #
###########################################################################
```

```
INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............    49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
```

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24D-LO-C  #################################################################################

ELAPSED TIME    DAYS       HOURS       MINUTES       DELT                        ISTEP   NIT   NITT
             264.9949 6359.8770   0.3816E+06   0.5000E+00                     627     1   1197
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-390.18	1.00	-386.09	-382.15	0.0624	0.0627	0.0631	0.36493E-15	0.00000E+00
2	12.5	-378.34	0.90	-374.64	-371.04	0.0634	0.0638	0.0642	0.38326E-15	-0.29073E-18
3	25.0	-367.53	0.83	-364.10	-360.74	0.0645	0.0649	0.0652	0.40730E-16	-0.22803E-16
4	37.5	-357.44	0.79	-354.18	-350.97	0.0656	0.0660	0.0663	0.58757E-19	0.89782E-18
5	50.0	-347.79	0.76	-344.36	-340.54	0.0667	0.0815	0.1090	-0.75352E-18	0.36391E-18
6	62.5	-336.58	0.95	-332.64	-328.69	0.1244	0.1254	0.1264	-0.62435E-19	-0.26698E-19
7	75.0	-324.76	0.94	-320.84	-316.92	0.1274	0.1285	0.1296	0.11532E-19	-0.38134E-20
8	87.5	-313.01	0.94	-309.10	-305.20	0.1307	0.1319	0.1330	-0.19394E-20	0.17819E-20
9	100.0	-301.30	0.94	-297.39	-293.49	0.1343	0.1355	0.1368	-0.49917E-21	0.79807E-22

PRZM+FEM Output Of Pesticide Concentration For 2,4-D Under Low Rainfall Year And CN: C (Continue)

10	112.5	-283.58	0.94	-285.68	-281.77	0.1381	0.1395	0.1409	0.13012E-22	-0.12537E-22
11	125.0	-277.85	0.94	-273.93	-270.01	0.1423	0.1438	0.1454	-0.82353E-23	0.16006E-22
12	137.5	-266.08	0.94	-262.14	-258.20	0.1470	0.1486	0.1503	-0.83996E-23	0.51183E-23
13	150.0	-254.26	0.94	-250.30	-246.32	0.1521	0.1539	0.1558	-0.86649E-24	-0.44658E-24
14	162.5	-242.40	0.93	-238.37	-234.64	0.1577	0.1556	0.1497	0.56165E-24	-0.48990E-24
15	175.0	-232.18	0.36	-229.71	-227.93	0.1467	0.1481	0.1490	0.20649E-24	-0.68489E-25
16	200.0	-226.25	0.22	-225.39	-224.62	0.1500	0.1505	0.1509	-0.33909E-26	-0.25540E-25
17	212.5	-223.87	0.18	-223.14	-222.44	0.1514	0.1518	0.1522	0.17023E-25	-0.49237E-26
18	225.0	-221.78	0.16	-221.13	-220.52	0.1526	0.1530	0.1534	-0.56091E-27	0.21373E-26
19	237.5	-219.93	0.14	-219.36	-218.81	0.1537	0.1541	0.1544	-0.98780E-27	0.93726E-27
20	250.0	-218.29	0.12	-217.79	-217.31	0.1547	0.1551	0.1554	-0.30993E-27	0.17711E-27
21	262.5	-216.84	0.11	-216.40	-215.98	0.1556	0.1559	0.1562	-0.38646E-28	-0.53001E-29
22	275.0	-215.58	0.09	-215.19	-214.82	0.1565	0.1567	0.1569	0.30791E-29	-0.14707E-28
23	287.5	-214.47	0.08	-214.13	-213.81	0.1572	0.1574	0.1576	0.60229E-29	-0.47435E-29
24	300.0	-213.51	0.07	-213.22	-212.95	0.1578	0.1580	0.1582	0.14619E-29	-0.56069E-30
25	312.5	-212.69	0.06	-212.45	-212.22	0.1583	0.1585	0.1586	0.60337E-31	0.18548E-30
26	325.0	-212.01	0.05	-211.81	-211.63	0.1588	0.1589	0.1590	-0.98948E-31	0.12489E-30
27	337.5	-211.47	0.04	-211.32	-211.19	0.1591	0.1592	0.1593	-0.45115E-31	0.37714E-31
28	350.0	-211.08	0.02	-210.98	-210.91	0.1594	0.1595	0.1595	-0.11142E-31	0.65793E-32
29	362.5	-210.85	0.01	-210.82	-210.81	0.1596	0.1596	0.1596	-0.14251E-32	0.12970E-33
30	375.0	-210.82	-0.01	-210.85	-210.92	0.1596	0.1596	0.1595	0.15323E-33	-0.38083E-33
31	387.5	-211.01	-0.03	-211.13	-211.29	0.1595	0.1594	0.1593	0.15409E-33	-0.16789E-33
32	400.0	-211.47	-0.05	-211.70	-211.97	0.1591	0.1590	0.1588	0.54650E-34	-0.47082E-34
33	412.5	-212.28	-0.08	-212.64	-213.06	0.1586	0.1584	0.1581	0.13504E-34	-0.98217E-35
34	425.0	-213.53	-0.12	-214.06	-214.65	0.1578	0.1574	0.1570	0.24817E-35	-0.14424E-35
35	437.5	-215.32	-0.17	-216.07	-216.91	0.1566	0.1561	0.1556	0.28648E-36	-0.64918E-37
36	450.0	-217.84	-0.24	-218.87	-220.02	0.1550	0.1544	0.1537	-0.13894E-37	0.49854E-37
37	462.5	-221.29	-0.32	-222.71	-224.27	0.1529	0.1521	0.1511	-0.20742E-37	0.24249E-37
38	475.0	-226.00	-0.44	-227.92	-230.04	0.1501	0.1491	0.1479	-0.79163E-38	0.76167E-38
39	487.5	-232.39	-0.59	-234.98	-237.86	0.1466	0.1452	0.1438	-0.22586E-38	0.19857E-38
40	500.0	-241.04	-0.80	-244.56	-248.45	0.1422	0.1405	0.1387	-0.55293E-39	0.46615E-39
41	512.5	-252.75	-1.08	-257.48	-262.66	0.1369	0.1349	0.1328	-0.12492E-39	0.10482E-39
42	525.0	-268.31	-1.41	-274.42	-280.95	0.1307	0.1285	0.1263	-0.27820E-40	0.23763E-40
43	537.5	-287.81	-1.68	-294.86	-301.89	0.1241	0.1221	0.1201	-0.63778E-41	0.55608E-41
44	550.0	-308.67	-1.58	-314.93	-320.47	0.1184	0.1169	0.1156	-0.15174E-41	0.13354E-41
45	562.5	-325.17	-1.02	-328.96	-331.95	0.1145	0.1137	0.1131	-0.36822E-42	0.32236E-42
46	575.0	-334.24	-0.48	-335.99	-337.35	0.1126	0.1123	0.1120	-0.89104E-43	0.76486E-43
47	587.5	-338.41	-0.23	-339.30	-340.07	0.1118	0.1117	0.1115	-0.21627E-43	0.17091E-43
48	600.0	-340.78	-0.16	-342.13	-341.62	0.1114	0.1111	0.1112	-0.62160E-44	0.18807E-44
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE.............../... 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 20.844
MOISTURE INCREASE IN PROFILE......... 20.754

**********NORMAL TERMINATION AT TIME = 265.49487 DAYS AND STEP NUMBER = 628

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: A

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*****************************************************************************
*                                                                           *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                              *
*                                                                           *
*    SUMAT43    data source: PRZM OUTPUT                                    *
*    TRY  NODE WIDTH= 12.5,      TMAX: 330    FOR  HIGH  YEAR               *
*    ATRAZINE,  HIGH RAINFALL,  CN: A                                       *
*                                                                           *
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INPUT PARAMETERS
================
NUMBER OF NODES.......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN..........................(RAINFALL CODE)..........   1
KDRAIN.........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3...............(WRITE MATERIAL PROPERTIES)..........   4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0

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ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	330.0549	7921.3174	0.4753E+06	0.5000E+00	766	1	2100

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-335.75	1.01	-331.77	-328.21	0.0682	0.0688	0.0693	0.10947E-03	0.00000E+00
2	12.5	-324.98	0.74	-322.01	-319.28	0.0698	0.0702	0.0706	0.28019E-03	0.16574E-04
3	25.0	-316.73	0.60	-314.31	-312.00	0.0710	0.0714	0.0718	0.10438E-02	0.80620E-04
4	37.5	-309.77	0.53	-307.57	-305.40	0.0722	0.0725	0.0729	0.93337E-03	-0.60171E-04
5	50.0	-303.28	0.50	-300.66	-297.27	0.0733	0.0895	0.1197	0.82805E-03	0.79545E-05
6	62.5	-293.57	0.89	-289.86	-286.14	0.1368	0.1380	0.1393	0.14230E-02	0.97631E-04
7	75.0	-282.42	0.89	-278.70	-274.98	0.1406	0.1420	0.1434	0.23246E-02	0.65139E-05
8	87.5	-271.25	0.90	-267.52	-263.78	0.1449	0.1464	0.1479	0.16985E-02	-0.46451E-04
9	100.0	-260.04	0.90	-256.28	-252.52	0.1495	0.1512	0.1529	0.19215E-02	0.76327E-04
10	112.5	-248.75	0.91	-244.97	-241.18	0.1546	0.1565	0.1584	0.25653E-02	0.35710E-04
11	125.0	-237.37	0.91	-233.56	-229.74	0.1603	0.1623	0.1644	0.30317E-02	0.78501E-04
12	137.5	-225.90	0.92	-222.05	-218.19	0.1666	0.1689	0.1712	0.38369E-02	0.68919E-04
13	150.0	-214.33	0.93	-210.43	-206.52	0.1737	0.1762	0.1789	0.39645E-02	0.30434E-04

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: A (Continue)

14	162.5	-202.66	0.92	-198.69	-195.05	0.1816	0.1803	0.1754	0.36411E-02	0.11632E-04
15	175.0	-192.70	0.33	-190.31	-188.42	0.1732	0.1752	0.1768	0.19011E-02	-0.19174E-03
16	200.0	-186.63	0.23	-185.73	-184.89	0.1784	0.1792	0.1799	-0.23705E-05	0.80735E-05
17	212.5	-184.08	0.19	-183.29	-182.52	0.1807	0.1814	0.1821	-0.13781E-06	-0.12215E-06
18	225.0	-181.78	0.18	-181.06	-180.36	0.1828	0.1835	0.1842	-0.17092E-06	0.11328E-06
19	237.5	-179.68	0.16	-179.02	-178.38	0.1848	0.1855	0.1861	-0.42623E-08	0.73468E-08
20	250.0	-177.77	0.15	-177.16	-176.58	0.1867	0.1873	0.1879	-0.14294E-08	0.10485E-08
21	262.5	-176.01	0.13	-175.46	-174.93	0.1884	0.1890	0.1895	-0.22318E-09	0.23042E-09
22	275.0	-174.41	0.12	-173.90	-173.41	0.1900	0.1906	0.1911	-0.91459E-10	0.46502E-10
23	287.5	-172.94	0.11	-172.47	-172.02	0.1916	0.1920	0.1925	-0.10360E-10	-0.10316E-10
24	300.0	-171.58	0.10	-171.16	-170.75	0.1930	0.1934	0.1939	0.76581E-11	-0.78335E-11
25	312.5	-170.34	0.10	-169.95	-169.57	0.1943	0.1947	0.1951	0.27455E-11	-0.14665E-11
26	325.0	-169.20	0.09	-168.84	-168.49	0.1955	0.1959	0.1963	0.22293E-12	0.22729E-13
27	337.5	-168.15	0.08	-167.82	-167.50	0.1967	0.1970	0.1974	-0.55948E-13	0.56573E-13
28	350.0	-167.19	0.07	-166.88	-166.59	0.1977	0.1981	0.1984	-0.14589E-13	0.15270E-13
29	362.5	-166.30	0.07	-166.01	-165.74	0.1987	0.1990	0.1994	-0.35422E-14	0.64097E-14
30	375.0	-165.47	0.06	-165.21	-164.95	0.1997	0.2000	0.2002	-0.25768E-14	0.27272E-14
31	387.5	-164.71	0.06	-164.46	-164.23	0.2005	0.2008	0.2011	-0.10428E-14	0.55156E-15
32	400.0	-163.99	0.05	-163.77	-163.55	0.2013	0.2016	0.2019	-0.13076E-15	-0.78862E-16
33	412.5	-163.33	0.05	-163.12	-162.91	0.2021	0.2023	0.2026	0.59596E-16	-0.88376E-16
34	425.0	-162.71	0.05	-162.51	-162.31	0.2028	0.2031	0.2033	0.34929E-16	-0.27876E-16
35	437.5	-162.12	0.05	-161.93	-161.75	0.2035	0.2037	0.2039	0.82559E-17	-0.37976E-17
36	450.0	-161.57	0.04	-161.39	-161.21	0.2042	0.2044	0.2046	0.52977E-18	0.52856E-18
37	462.5	-161.04	0.04	-160.87	-160.70	0.2048	0.2050	0.2052	-0.34673E-18	0.44336E-18
38	475.0	-160.54	0.04	-160.38	-160.21	0.2054	0.2056	0.2058	-0.16053E-18	0.13251E-18
39	487.5	-160.06	0.04	-159.90	-159.74	0.2060	0.2061	0.2063	-0.38795E-19	0.22565E-19
40	500.0	-159.59	0.04	-159.44	-159.29	0.2065	0.2067	0.2069	-0.47335E-20	0.37349E-21
41	512.5	-159.14	0.04	-159.00	-158.85	0.2071	0.2072	0.2074	0.62077E-21	-0.12043E-20
42	525.0	-158.71	0.03	-158.56	-158.42	0.2076	0.2078	0.2079	0.50134E-21	-0.43917E-21
43	537.5	-158.28	0.03	-158.15	-158.01	0.2081	0.2083	0.2084	0.13235E-21	-0.82125E-22
44	550.0	-157.87	0.03	-157.74	-157.61	0.2086	0.2088	0.2089	0.16287E-22	-0.64320E-23
45	562.5	-157.47	0.03	-157.34	-157.21	0.2091	0.2093	0.2094	-0.18449E-24	0.30467E-24
46	575.0	-157.09	0.03	-156.96	-156.83	0.2096	0.2097	0.2099	-0.11944E-24	-0.56688E-25
47	587.5	-156.71	0.03	-156.59	-156.47	0.2100	0.2102	0.2103	0.94409E-25	-0.13247E-25
48	600.0	-156.35	0.03	-156.11	-155.88	0.2105	0.2108	0.2111	-0.38540E-25	0.20484E-25
49	625.0	-155.66	0.03	-155.44	-155.24	0.2114	0.2116	0.2119	-0.11275E-25	0.77130E-26
50	650.0	-155.04	0.02	-154.85	-154.67	0.2121	0.2124	0.2126	-0.49089E-26	0.30338E-26
51	675.0	-154.51	0.02	-154.36	-154.24	0.2128	0.2130	0.2132	-0.19424E-26	0.10579E-26
52	700.0	-154.13	0.01	-154.06	-154.03	0.2133	0.2134	0.2134	-0.65554E-27	0.32541E-27
53	725.0	-154.03	0.00	-154.11	-154.27	0.2134	0.2133	0.2131	-0.20116E-27	0.86188E-28
54	750.0	-154.50	-0.03	-154.92	-155.57	0.2128	0.2123	0.2115	-0.49104E-28	0.18001E-28
55	775.0	-156.24	-0.07	-157.62	-159.70	0.2106	0.2089	0.2064	-0.96765E-29	0.24817E-29
56	800.0	-161.20	-0.10	-166.02	-173.86	0.2046	0.1990	0.1906	-0.10031E-29	-0.21122E-30
57	825.0	-177.24	0.16	-219.78	-298.61	0.1872	0.1538	0.1210	0.44060E-30	-0.27676E-30
58	850.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................. 0.000
DRAINAGE RATE..................... 0.000

MOISTURE ADDED TO PROFILE............ 88.194
MOISTURE INCREASE IN PROFILE......... 67.389

**********NORMAL TERMINATION AT TIME = 330.05489 DAYS AND STEP NUMBER = 766

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: B

```
################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#    SUMAT43    data source: PRZM OUTPUT                                       #
#    TRY  NODE WIDTH= 12.5,      TMAX: 330   FOR  HIGH  YEAR                   #
#    ATRAZINE,   HIGH RAINFALL,  CN: B                                         #
#                                                                              #
################################################################################
```

```
INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1.............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
```

ATZ-HI-B ##

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	329.9781	7919.4750	0.4752E+06	0.5000E+00	763	1	2098

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-335.58	1.01	-331.61	-328.06	0.0683	0.0688	0.0693	0.10284E-03	0.00000E+00
2	12.5	-324.83	0.74	-321.88	-319.16	0.0698	0.0702	0.0706	0.27169E-03	0.49920E-05
3	25.0	-316.62	0.59	-314.21	-311.91	0.0710	0.0714	0.0718	0.11587E-02	0.11596E-03
4	37.5	-309.68	0.53	-307.49	-305.33	0.0722	0.0726	0.0729	0.76204E-03	-0.80532E-04
5	50.0	-303.21	0.50	-300.59	-297.20	0.0733	0.0895	0.1197	0.10022E-02	-0.19659E-04
6	62.5	-293.50	0.89	-289.79	-286.08	0.1368	0.1380	0.1393	0.12077E-02	0.11538E-03
7	75.0	-282.36	0.89	-278.64	-274.91	0.1407	0.1420	0.1435	0.24848E-02	0.24846E-04
8	87.5	-271.19	0.90	-267.45	-263.71	0.1449	0.1464	0.1480	0.18554E-02	-0.61761E-04
9	100.0	-259.97	0.90	-256.21	-252.45	0.1496	0.1512	0.1529	0.18503E-02	0.68858E-04
10	112.5	-248.68	0.91	-244.90	-241.11	0.1547	0.1565	0.1584	0.25907E-02	0.43960E-04
11	125.0	-237.30	0.91	-233.49	-229.67	0.1603	0.1624	0.1645	0.29654E-02	0.61888E-04
12	137.5	-225.83	0.92	-221.98	-218.12	0.1667	0.1689	0.1713	0.37903E-02	0.81421E-04
13	150.0	-214.26	0.93	-210.36	-206.45	0.1737	0.1763	0.1789	0.40437E-02	0.21637E-04

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: B (Continue)

14	162.5	-202.59	0.92	-198.62	-194.98	0.1816	0.1803	0.1754	0.37740E-02	0.12355E-04
15	175.0	-192.63	0.33	-190.24	-188.35	0.1732	0.1752	0.1769	0.22865E-02	-0.19932E-03
16	200.0	-186.56	0.23	-185.66	-184.82	0.1785	0.1793	0.1800	-0.36912E-05	0.90461E-05
17	212.5	-184.01	0.20	-183.21	-182.45	0.1808	0.1815	0.1822	0.19559E-05	-0.55852E-06
18	225.0	-181.71	0.18	-180.98	-180.29	0.1829	0.1836	0.1842	-0.42340E-06	0.19545E-06
19	237.5	-179.61	0.16	-178.95	-178.31	0.1849	0.1855	0.1861	0.17561E-08	0.51249E-08
20	250.0	-177.69	0.15	-177.09	-176.51	0.1868	0.1873	0.1879	-0.21720E-09	0.31638E-09
21	262.5	-175.94	0.13	-175.39	-174.85	0.1885	0.1891	0.1896	-0.90710E-10	0.18691E-09
22	275.0	-174.33	0.12	-173.83	-173.34	0.1901	0.1906	0.1912	-0.10086E-09	0.37293E-10
23	287.5	-172.86	0.11	-172.39	-171.94	0.1916	0.1921	0.1926	-0.11675E-11	-0.18074E-10
24	300.0	-171.51	0.10	-171.08	-170.67	0.1931	0.1935	0.1940	0.10135E-10	-0.81321E-11
25	312.5	-170.26	0.10	-169.87	-169.49	0.1944	0.1948	0.1952	0.23032E-11	-0.99665E-12
26	325.0	-169.12	0.09	-168.76	-168.41	0.1956	0.1960	0.1964	0.54159E-13	0.72815E-13
27	337.5	-168.07	0.08	-167.73	-167.41	0.1968	0.1971	0.1975	-0.35363E-13	0.46788E-13
28	350.0	-167.10	0.07	-166.79	-166.49	0.1978	0.1982	0.1985	-0.94010E-14	0.24459E-13
29	362.5	-166.20	0.07	-165.92	-165.64	0.1988	0.1992	0.1995	-0.97312E-14	0.12964E-13
30	375.0	-165.37	0.06	-165.11	-164.85	0.1998	0.2001	0.2004	-0.52591E-14	0.36795E-14
31	387.5	-164.60	0.06	-164.36	-164.12	0.2006	0.2009	0.2012	-0.11218E-14	0.92884E-16
32	400.0	-163.88	0.06	-163.66	-163.43	0.2015	0.2017	0.2020	0.12466E-15	-0.33985E-15
33	412.5	-163.21	0.05	-163.00	-162.79	0.2022	0.2025	0.2027	0.15197E-15	-0.14061E-15
34	425.0	-162.59	0.05	-162.38	-162.19	0.2030	0.2032	0.2034	0.45945E-16	-0.26200E-16
35	437.5	-161.99	0.05	-161.80	-161.61	0.2037	0.2039	0.2041	0.55616E-17	0.41298E-18
36	450.0	-161.43	0.04	-161.25	-161.07	0.2043	0.2045	0.2047	-0.11057E-17	0.19390E-17
37	462.5	-160.90	0.04	-160.72	-160.55	0.2050	0.2052	0.2054	-0.77339E-18	0.70241E-18
38	475.0	-160.38	0.04	-160.22	-160.05	0.2056	0.2058	0.2060	-0.22040E-18	0.13987E-18
39	487.5	-159.89	0.04	-159.73	-159.57	0.2062	0.2063	0.2065	-0.33235E-19	0.72436E-20
40	500.0	-159.42	0.04	-159.26	-159.11	0.2067	0.2069	0.2071	0.19999E-20	-0.61693E-20
41	512.5	-158.96	0.04	-158.81	-158.66	0.2073	0.2075	0.2076	0.28074E-20	-0.25664E-20
42	525.0	-158.51	0.04	-158.37	-158.22	0.2078	0.2080	0.2082	0.81139E-21	-0.48991E-21
43	537.5	-158.08	0.03	-157.93	-157.79	0.2084	0.2085	0.2087	0.98312E-22	-0.23827E-22
44	550.0	-157.65	0.03	-157.51	-157.38	0.2089	0.2090	0.2092	-0.86857E-23	0.10647E-22
45	562.5	-157.24	0.03	-157.11	-156.97	0.2094	0.2096	0.2097	-0.42587E-23	0.16978E-23
46	575.0	-156.84	0.03	-156.71	-156.58	0.2099	0.2100	0.2102	0.46222E-25	-0.29000E-24
47	587.5	-156.45	0.03	-156.32	-156.19	0.2104	0.2105	0.2107	0.19190E-24	-0.24187E-25
48	600.0	-156.07	0.03	-155.82	-155.58	0.2108	0.2112	0.2115	-0.67179E-25	0.31053E-25
49	625.0	-155.34	0.03	-155.12	-154.90	0.2118	0.2120	0.2123	-0.16555E-25	0.10008E-25
50	650.0	-154.68	0.02	-154.48	-154.29	0.2126	0.2128	0.2131	-0.63207E-26	0.34997E-26
51	675.0	-154.11	0.02	-153.95	-153.81	0.2133	0.2135	0.2137	-0.21998E-26	0.10743E-26
52	700.0	-153.69	0.01	-153.60	-153.54	0.2139	0.2140	0.2140	-0.64682E-27	0.28570E-27
53	725.0	-153.53	0.00	-153.59	-153.73	0.2141	0.2140	0.2138	-0.16801E-27	0.61760E-28
54	750.0	-153.93	-0.03	-154.34	-154.97	0.2135	0.2130	0.2122	-0.31456E-28	0.92545E-29
55	775.0	-155.61	-0.07	-156.96	-159.02	0.2114	0.2097	0.2072	-0.43569E-29	0.18153E-30
56	800.0 ,	-160.49	-0.09	-165.28	-173.10	0.2054	0.1999	0.1914	0.36842E-30	-0.68835E-30
57	825.0	-176.39	0.18	-219.09	-298.36	0.1880	0.1542	0.1211	0.65461E-30	-0.33378E-30
58	850.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 89.425
MOISTURE INCREASE IN PROFILE......... 67.602

**********NORMAL TERMINATION AT TIME = 330.47813 DAYS AND STEP NUMBER = 764

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: C

```
################################################################################
*                                                                              *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 *
*                                                                              *
*     SUMAT43    data source: PRZM OUTPUT                                      *
*     TRY  NODE WIDTH= 12.5,      TMAX: 330   FOR  HIGH  YEAR                  *
*     ATRAZINE,  HIGH RAINFALL,  CN: C                                         *
*                                                                              *
################################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 330.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 110.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..........................(RAINFALL CODE)..........    1
KDRAIN.........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

ATZ-HI-C    ########################################################################

ELAPSED TIME    DAYS      HOURS       MINUTES       DELT                    ISTEP    NIT   NITT
              330.0384 7920.9219    0.4753E+06   0.5000E+00                  767      1    2107
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-335.69	1.01	-331.71	-328.15	0.0683	0.0688	0.0693	0.10762E-03	0.00000E+00
2	12.5	-324.92	0.74	-321.95	-319.22	0.0698	0.0702	0.0706	0.27859E-03	0.13421E-04
3	25.0	-316.67	0.60	-314.25	-311.94	0.0710	0.0714	0.0718	0.11649E-02	0.10390E-03
4	37.5	-309.71	0.53	-307.52	-305.35	0.0722	0.0725	0.0729	0.10536E-02	-0.84501E-04
5	50.0	-303.23	0.50	-300.60	-297.22	0.0733	0.0895	0.1197	0.89064E-03	0.19358E-04
6	62.5	-293.52	0.89	-289.81	-286.09	0.1368	0.1380	0.1393	0.12257E-02	0.72150E-04
7	75.0	-282.37	0.89	-278.65	-274.93	0.1407	0.1420	0.1434	0.25099E-02	0.89058E-04
8	87.5	-271.20	0.90	-267.47	-263.73	0.1449	0.1464	0.1479	0.22938E-02	-0.90940E-04
9	100.0	-259.98	0.90	-256.23	-252.47	0.1495	0.1512	0.1529	0.17134E-02	0.36436E-04
10	112.5	-248.69	0.91	-244.91	-241.12	0.1547	0.1565	0.1584	0.24483E-02	0.60843E-04
11	125.0	-237.32	0.91	-233.51	-229.68	0.1603	0.1624	0.1645	0.28452E-02	0.42048E-04
12	137.5	-225.85	0.92	-222.00	-218.14	0.1666	0.1689	0.1713	0.35976E-02	0.89675E-04
13	150.0	-214.27	0.93	-210.38	-206.47	0.1737	0.1762	0.1789	0.40777E-02	0.20835E-04

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: C (Continue)

14	162.5	-202.61	0.92	-198.64	-194.99	0.1816	0.1803	0.1754	0.38734E-02	0.46036E-05
15	175.0	-192.64	0.33	-190.26	-188.37	0.1732	0.1752	0.1769	0.27123E-02	-0.19066E-03
16	200.0	-186.57	0.23	-185.67	-184.83	0.1784	0.1792	0.1800	0.39057E-05	0.59546E-05
17	212.5	-184.02	0.20	-183.22	-182.46	0.1807	0.1815	0.1822	0.54134E-05	-0.95379E-06
18	225.0	-181.71	0.18	-180.99	-180.29	0.1829	0.1836	0.1842	-0.76991E-06	0.24658E-06
19	237.5	-179.61	0.16	-178.95	-178.31	0.1849	0.1855	0.1861	0.18308E-07	0.12750E-08
20	250.0	-177.69	0.15	-177.09	-176.50	0.1868	0.1873	0.1879	0.88961E-09	-0.35613E-09
21	262.5	-175.94	0.13	-175.38	-174.85	0.1885	0.1891	0.1896	0.20736E-10	0.23097E-10
22	275.0	-174.32	0.12	-173.82	-173.33	0.1901	0.1907	0.1912	-0.26340E-10	-0.18194E-10
23	287.5	-172.85	0.11	-172.38	-171.93	0.1917	0.1921	0.1926	0.16022E-10	-0.20148E-10
24	300.0	-171.49	0.10	-171.06	-170.64	0.1931	0.1935	0.1940	0.69698E-11	-0.48079E-11
25	312.5	-170.24	0.10	-169.85	-169.46	0.1944	0.1948	0.1952	0.10320E-11	-0.62807E-12
26	325.0	-169.09	0.09	-168.73	-168.38	0.1956	0.1960	0.1964	0.19236E-12	-0.45793E-13
27	337.5	-168.03	0.08	-167.70	-167.37	0.1968	0.1972	0.1975	0.27575E-13	0.79206E-13
28	350.0	-167.06	0.08	-166.75	-166.45	0.1979	0.1982	0.1986	-0.39997E-13	0.62821E-13
29	362.5	-166.15	0.07	-165.87	-165.59	0.1989	0.1992	0.1995	-0.26469E-13	0.20189E-13
30	375.0	-165.32	0.06	-165.05	-164.79	0.1998	0.2001	0.2004	-0.63537E-14	0.15289E-14
31	387.5	-164.54	0.06	-164.29	-164.05	0.2007	0.2010	0.2013	0.22296E-15	-0.13270E-14
32	400.0	-163.81	0.06	-163.58	-163.36	0.2015	0.2018	0.2021	0.63444E-15	-0.63238E-15
33	412.5	-163.13	0.05	-162.92	-162.71	0.2023	0.2026	0.2028	0.21282E-15	-0.13613E-15
34	425.0	-162.50	0.05	-162.29	-162.09	0.2031	0.2033	0.2035	0.33160E-16	-0.63006E-17
35	437.5	-161.89	0.05	-161.70	-161.51	0.2038	0.2040	0.2042	-0.19905E-17	0.71753E-17
36	450.0	-161.32	0.04	-161.14	-160.96	0.2044	0.2047	0.2049	-0.31420E-17	0.33694E-17
37	462.5	-160.78	0.04	-160.60	-160.43	0.2051	0.2053	0.2055	-0.11599E-17	0.84880E-18
38	475.0	-160.26	0.04	-160.09	-159.92	0.2057	0.2059	0.2061	-0.23792E-18	0.88261E-19
39	487.5	-159.75	0.04	-159.59	-159.43	0.2063	0.2065	0.2067	-0.53661E-20	-0.28070E-19
40	500.0	-159.27	0.04	-159.11	-158.95	0.2069	0.2071	0.2073	0.15308E-19	-0.16144E-19
41	512.5	-158.79	0.04	-158.64	-158.49	0.2075	0.2077	0.2079	0.56088E-20	-0.36712E-20
42	525.0	-158.34	0.04	-158.19	-158.04	0.2080	0.2082	0.2084	0.86804E-21	-0.24571E-21
43	537.5	-157.89	0.04	-157.74	-157.59	0.2086	0.2088	0.2089	-0.38547E-22	0.10872E-21
44	550.0	-157.45	0.03	-157.31	-157.16	0.2091	0.2093	0.2095	-0.49797E-22	0.39845E-22
45	562.5	-157.02	0.03	-156.88	-156.74	0.2097	0.2098	0.2100	-0.11063E-22	0.61609E-23
46	575.0	-156.60	0.03	-156.47	-156.33	0.2102	0.2103	0.2105	-0.10938E-23	0.20003E-24
47	587.5	-156.20	0.03	-156.06	-155.93	0.2107	0.2109	0.2110	0.79181E-25	-0.19310E-24
48	600.0	-155.80	0.03	-155.54	-155.28	0.2112	0.2115	0.2118	0.12292E-24	-0.45591E-25
49	625.0	-155.04	0.03	-154.79	-154.56	0.2121	0.2125	0.2127	0.22214E-25	-0.10755E-25
50	650.0	-154.33	0.03	-154.11	-153.91	0.2130	0.2133	0.2136	0.63700E-26	-0.29606E-26
51	675.0	-153.71	0.02	-153.53	-153.37	0.2138	0.2141	0.2143	0.17652E-26	-0.72831E-27
52	700.0	-153.23	0.02	-153.12	-153.04	0.2145	0.2146	0.2147	0.41886E-27	-0.13313E-27
53	725.0	-153.01	0.00	-153.04	-153.16	0.2147	0.2147	0.2145	0.72371E-28	-0.53156E-29
54	750.0	-153.34	-0.02	-153.72	-154.33	0.2143	0.2138	0.2130	-0.18881E-29	0.11543E-28
55	775.0	-154.94	-0.07	-156.27	-158.30	0.2123	0.2106	0.2081	-0.95362E-29	0.69775E-29
56	800.0	-159.73	-0.08	-164.49	-172.29	0.2063	0.2008	0.1922	-0.47267E-29	0.27051E-29
57	825.0	-175.49	0.20	-218.35	-298.10	0.1890	0.1547	0.1212	-0.18988E-29	0.81813E-30
58	850.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE..................... 0.000

MOISTURE ADDED TO PROFILE............ 91.178
MOISTURE INCREASE IN PROFILE......... 67.794

**********NORMAL TERMINATION AT TIME = 330.03841 DAYS AND STEP NUMBER = 767

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: A

```
******************************************************************************
*                                                                            *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                               *
*                                                                            *
*    SUMAT43    data source: PRZM OUTPUT                                     *
*    TRY  NODE WIDTH= 12.5,      TMAX:  320   FOR  AVG.  YEAR                *
*    ATRAZINE,  CN: A                                                        *
*                                                                            *
******************************************************************************
```

```
INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   53
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
```

ATZ-AV-A **

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	319.8828	7677.1882	0.4606E+06	0.5000E+00	747	1	1879

		PRESSURE HEAD				MOISTURE CONTENT			CONCENTRATION	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-300.77	1.00	-296.94	-293.70	0.0738	0.0745	0.0751	0.22600E-03	0.00000E+00
2	12.5	-290.93	0.62	-288.67	-286.90	0.0757	0.0761	0.0765	0.22152E-02	0.39561E-04
3	25.0	-285.49	0.31	-284.49	-283.97	0.0768	0.0770	0.0771	0.17310E-02	-0.52615E-04
4	37.5	-283.84	-0.01	-284.07	-284.78	0.0772	0.0771	0.0770	0.14681E-02	0.49490E-04
5	50.0	-286.11	-0.40	-286.43	-284.76	0.0767	0.0928	0.1235	0.21867E-02	0.15787E-04
6	62.5	-282.17	0.64	-279.49	-276.81	0.1407	0.1417	0.1427	0.29085E-02	0.94331E-04
7	75.0	-274.12	0.65	-271.41	-268.67	0.1438	0.1448	0.1459	0.42976E-02	0.10437E-03
8	87.5	-265.90	0.67	-263.10	-260.24	0.1470	0.1482	0.1494	0.46642E-02	-0.62664E-04
9	100.0	-257.34	0.70	-254.39	-251.38	0.1507	0.1520	0.1534	0.29347E-02	-0.18578E-03
10	112.5	-248.31	0.74	-245.18	-241.99	0.1549	0.1564	0.1579	0.91372E-03	-0.11658E-03
11	125.0	-238.74	0.79	-235.42	-232.05	0.1596	0.1613	0.1632	0.11426E-03	-0.22484E-04
12	137.5	-228.62	0.83	-225.13	-221.59	0.1651	0.1671	0.1692	0.58875E-05	-0.16059E-05

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: A (Continue)

13	150.0	-218.00	0.86	-214.35	-210.64	0.1713	0.1737	0.1761	0.22307E-06	-0.61899E-07
14	162.5	-206.97	0.87	-203.12	-199.74	0.1785	0.1770	0.1717	0.38041E-07	-0.84254E-08
15	175.0	-198.21	0.03	-198.30	-198.70	0.1687	0.1687	0.1684	0.29515E-09	-0.32887E-09
16	200.0	-198.76	0.04	-198.61	-198.47	0.1683	0.1684	0.1685	0.13281E-09	-0.10569E-09
17	212.5	-198.26	0.06	-197.99	-197.69	0.1687	0.1689	0.1691	0.27480E-10	0.17453E-10
18	225.0	-197.35	0.09	-196.97	-196.57	0.1694	0.1697	0.1700	-0.16982E-10	0.11190E-10
19	237.5	-196.15	0.10	-195.71	-195.25	0.1704	0.1707	0.1711	-0.28441E-11	0.27538E-12
20	250.0	-194.77	0.12	-194.29	-193.79	0.1715	0.1719	0.1723	0.23503E-12	-0.13711E-12
21	262.5	-193.29	0.12	-192.79	-192.28	0.1727	0.1731	0.1735	0.12873E-12	-0.92186E-13
22	275.0	-191.76	0.12	-191.25	-190.74	0.1740	0.1744	0.1748	-0.15511E-14	-0.10244E-14
23	287.5	-190.22	0.12	-189.71	-189.20	0.1753	0.1757	0.1761	-0.35213E-14	0.20780E-15
24	300.0	-188.70	0.12	-188.20	-187.71	0.1766	0.1770	0.1774	0.26033E-15	-0.11496E-14
25	312.5	-187.22	0.12	-186.73	-186.25	0.1779	0.1783	0.1787	0.61922E-15	-0.43754E-15
26	325.0	-185.78	0.11	-185.31	-184.85	0.1791	0.1796	0.1800	0.12229E-15	-0.39405E-17
27	337.5	-184.39	0.11	-183.94	-183.50	0.1804	0.1808	0.1812	-0.20783E-16	0.36972E-16
28	350.0	-183.06	0.10	-182.63	-182.20	0.1816	0.1820	0.1824	-0.15807E-16	0.11201E-16
29	362.5	-181.78	0.10	-181.37	-180.96	0.1828	0.1832	0.1836	-0.29946E-17	0.91599E-18
30	375.0	-180.55	0.10	-180.15	-179.76	0.1840	0.1844	0.1847	0.21339E-18	-0.25937E-18
31	387.5	-179.37	0.09	-178.99	-178.61	0.1851	0.1855	0.1859	0.14465E-18	-0.97851E-20
32	400.0	-178.24	0.09	-177.87	-177.51	0.1862	0.1866	0.1869	-0.16755E-19	0.50502E-19
33	412.5	-177.15	0.09	-176.79	-176.44	0.1873	0.1876	0.1880	-0.23724E-19	0.21732E-19
34	425.0	-176.10	0.08	-175.76	-175.42	0.1883	0.1887	0.1890	-0.71328E-20	0.38289E-20
35	437.5	-175.09	0.08	-174.76	-174.44	0.1894	0.1897	0.1900	-0.65681E-21	-0.12028E-21
36	450.0	-174.12	0.08	-173.80	-173.49	0.1903	0.1907	0.1910	0.21887E-21	-0.20918E-21
37	462.5	-173.19	0.07	-172.88	-172.59	0.1913	0.1916	0.1919	0.77634E-22	-0.24210E-22
38	475.0	-172.29	0.07	-172.00	-171.72	0.1922	0.1925	0.1928	-0.21168E-23	0.12379E-22
39	487.5	-171.44	0.07	-171.16	-170.89	0.1931	0.1934	0.1937	-0.70320E-23	0.43411E-23
40	500.0	-170.63	0.06	-170.37	-170.11	0.1940	0.1943	0.1945	-0.14549E-23	-0.53186E-24
41	512.5	-169.86	0.06	-169.61	-169.37	0.1948	0.1951	0.1953	0.40696E-24	-0.89522E-24
42	525.0	-169.14	0.06	-168.91	-168.68	0.1956	0.1958	0.1961	0.36185E-24	-0.38467E-24
43	537.5	-168.47	0.05	-168.25	-168.05	0.1963	0.1966	0.1968	0.12769E-24	-0.10022E-24
44	550.0	-167.85	0.05	-167.67	-167.49	0.1970	0.1972	0.1974	0.27414E-25	-0.16056E-25
45	562.5	-167.31	0.04	-167.15	-167.00	0.1976	0.1978	0.1979	0.30097E-26	-0.83382E-27
46	575.0	-166.86	0.03	-166.73	-166.61	0.1981	0.1982	0.1984	-0.21521E-27	0.25999E-27
47	587.5	-166.51	0.02	-166.42	-166.35	0.1985	0.1986	0.1987	-0.11615E-27	0.23823E-28
48	600.0	-166.29	0.01	-166.25	-166.33	0.1987	0.1988	0.1987	0.27741E-28	-0.13694E-28
49	625.0	-166.49	-0.02	-166.87	-167.50	0.1985	0.1981	0.1974	0.74826E-29	-0.47065E-29
50	650.0	-168.21	-0.08	-169.63	-171.77	0.1966	0.1951	0.1928	0.29870E-29	-0.17269E-29
51	675.0	-173.56	-0.15	-178.50	-186.50	0.1909	0.1860	0.1785	0.10938E-29	-0.56669E-30
52	700.0	-191.04	-0.08	-230.89	-302.63	0.1746	0.1474	0.1199	0.37169E-30	-0.15732E-30
53	725.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 52.320
MOISTURE INCREASE IN PROFILE......... 47.875

**********NORMAL TERMINATION AT TIME = 320.38284 DAYS AND STEP NUMBER = 748

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: B

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**************************************************************************
*                                                                        *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                           *
*                                                                        *
*    SUMAT43    data source: PRZM OUTPUT                                 *
*    TRY  NODE WIDTH= 12.5,     TMAX:  320   FOR  AVG.  YEAR             *
*    ATRAZINE,   CN: B                                                   *
*                                                                        *
**************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   53
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..........................(RAINFALL CODE)..........   1
KDRAIN.........................(DRAINAGE CODE)..........   2
KOD1.............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3..............(WRITE MATERIAL PROPERTIES)..........   4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0


ATZ-AV-B    ******************************************************************************

ELAPSED TIME     DAYS      HOURS       MINUTES       DELT                          ISTEP    NIT   NITT
             320.0572 7681.3723    0.4609E+06   0.5000E+00                          750      1   1895
```

		---PRESSURE HEAD---				---MOISTURE CONTENT---			---CONCENTRATION---	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-301.73	1.00	-297.88	-294.62	0.0736	0.0743	0.0749	0.23832E-03	0.00000E+00
2	12.5	-291.87	0.61	-289.60	-287.78	0.0755	0.0759	0.0763	0.23772E-02	0.65025E-04
3	25.0	-286.37	0.29	-285.36	-284.76	0.0766	0.0768	0.0770	0.17313E-02	-0.38256E-04
4	37.5	-284.60	-0.01	-284.81	-285.44	0.0770	0.0769	0.0768	0.14660E-02	0.46416E-04
5	50.0	-286.69	-0.39	-286.95	-285.22	0.0765	0.0927	0.1234	0.21839E-02	0.12499E-05
6	62.5	-282.60	0.65	-279.89	-277.18	0.1406	0.1416	0.1426	0.28603E-02	0.10158E-03
7	75.0	-274.46	0.65	-271.72	-268.96	0.1436	0.1447	0.1458	0.42293E-02	0.10091E-03
8	87.5	-266.16	0.68	-263.33	-260.45	0.1469	0.1481	0.1493	0.47985E-02	-0.33732E-04
9	100.0	-257.52	0.71	-254.54	-251.51	0.1506	0.1520	0.1533	0.31965E-02	-0.19649E-03
10	112.5	-248.42	0.75	-245.27	-242.07	0.1548	0.1563	0.1579	0.10007E-02	-0.12746E-03
11	125.0	-238.80	0.79	-235.47	-232.09	0.1596	0.1613	0.1631	0.12937E-03	-0.24641E-04
12	137.5	-228.65	0.83	-225.15	-221.59	0.1650	0.1671	0.1692	0.81227E-05	-0.19579E-05

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: B (Continue)

13	150.0	-218.00	0.86	-214.34	-210.62	0.1713	0.1737	0.1761	0.40839E-06	-0.11434E-06
14	162.5	-206.95	0.87	-203.11	-199.72	0.1786	0.1770	0.1718	0.24750E-07	-0.79715E-08
15	175.0	-198.18	0.04	-198.24	-198.62	0.1688	0.1687	0.1684	-0.20166E-09	-0.31203E-09
16	200.0	-198.68	0.04	-198.54	-198.40	0.1684	0.1685	0.1686	0.16686E-09	-0.10778E-09
17	212.5	-198.20	0.06	-197.93	-197.63	0.1688	0.1690	0.1692	0.15842E-10	0.20226E-10
18	225.0	-197.29	0.09	-196.92	-196.52	0.1695	0.1698	0.1701	-0.15571E-10	0.10576E-10
19	237.5	-196.10	0.10	-195.66	-195.20	0.1704	0.1708	0.1711	-0.27255E-11	0.56773E-12
20	250.0	-194.73	0.11	-194.25	-193.75	0.1715	0.1719	0.1723	0.83774E-13	-0.10416E-12
21	262.5	-193.25	0.12	-192.75	-192.24	0.1727	0.1731	0.1736	0.14413E-12	-0.89971E-13
22	275.0	-191.73	0.12	-191.21	-190.70	0.1740	0.1744	0.1749	-0.97135E-15	-0.38234E-14
23	287.5	-190.19	0.12	-189.68	-189.17	0.1753	0.1757	0.1762	-0.22185E-14	-0.58932E-15
24	300.0	-188.66	0.12	-188.16	-187.67	0.1766	0.1770	0.1775	0.44205E-15	-0.10260E-14
25	312.5	-187.18	0.12	-186.69	-186.21	0.1779	0.1783	0.1788	0.50116E-15	-0.33933E-15
26	325.0	-185.74	0.11	-185.27	-184.81	0.1792	0.1796	0.1800	0.90772E-16	-0.72364E-18
27	337.5	-184.35	0.11	-183.90	-183.45	0.1804	0.1809	0.1813	-0.15645E-16	0.29278E-16
28	350.0	-183.02	0.10	-182.58	-182.16	0.1817	0.1821	0.1825	-0.12273E-16	0.96504E-17
29	362.5	-181.73	0.10	-181.32	-180.91	0.1829	0.1833	0.1836	-0.27582E-17	0.13076E-17
30	375.0	-180.50	0.10	-180.10	-179.71	0.1840	0.1844	0.1848	-0.61658E-19	-0.14244E-19
31	387.5	-179.32	0.09	-178.93	-178.55	0.1852	0.1855	0.1859	0.56053E-19	0.20424E-19
32	400.0	-178.18	0.09	-177.81	-177.45	0.1863	0.1866	0.1870	-0.16583E-19	0.38248E-19
33	412.5	-177.09	0.09	-176.73	-176.38	0.1874	0.1877	0.1881	-0.16694E-19	0.16154E-19
34	425.0	-176.03	0.08	-175.69	-175.35	0.1884	0.1887	0.1891	-0.53197E-20	0.33478E-20
35	437.5	-175.02	0.08	-174.69	-174.36	0.1894	0.1898	0.1901	-0.72616E-21	0.18946E-21
36	450.0	-174.04	0.08	-173.72	-173.41	0.1904	0.1907	0.1911	0.58379E-22	-0.81902E-22
37	462.5	-173.10	0.07	-172.80	-172.50	0.1914	0.1917	0.1920	0.36750E-22	-0.13277E-22
38	475.0	-172.20	0.07	-171.91	-171.62	0.1923	0.1926	0.1929	-0.10401E-23	0.44037E-23
39	487.5	-171.34	0.07	-171.06	-170.79	0.1932	0.1935	0.1938	-0.30902E-23	0.62287E-24
40	500.0	-170.52	0.06	-170.26	-170.00	0.1941	0.1944	0.1947	-0.19576E-24	-0.12066E-23
41	512.5	-169.74	0.06	-169.49	-169.25	0.1949	0.1952	0.1955	0.53500E-24	-0.85887E-24
42	525.0	-169.01	0.06	-168.77	-168.55	0.1957	0.1960	0.1962	0.31821E-24	-0.32982E-24
43	537.5	-168.32	0.05	-168.11	-167.90	0.1965	0.1967	0.1969	0.10604E-24	-0.86743E-25
44	550.0	-167.70	0.05	-167.50	-167.32	0.1972	0.1974	0.1976	0.23987E-25	-0.16094E-25
45	562.5	-167.14	0.04	-166.97	-166.81	0.1978	0.1980	0.1982	0.35793E-26	-0.19664E-26
46	575.0	-166.66	0.03	-166.52	-166.40	0.1983	0.1985	0.1986	0.26700E-27	-0.15482E-27
47	587.5	-166.28	0.03	-166.19	-166.11	0.1987	0.1988	0.1989	0.14503E-28	-0.42728E-28
48	600.0	-166.04	0.01	-165.98	-166.03	0.1990	0.1991	0.1990	0.32041E-28	-0.12616E-28
49	625.0	-166.16	-0.02	-166.51	-167.12	0.1989	0.1985	0.1978	0.62250E-29	-0.33997E-29
50	650.0	-167.79	-0.08	-169.18	-171.29	0.1971	0.1956	0.1933	0.20632E-29	-0.11008E-29
51	675.0	-173.02	-0.14	-177.93	-185.90	0.1915	0.1865	0.1790	0.67753E-30	-0.33328E-30
52	700.0	-190.35	-0.06	-230.32	-302.43	0.1751	0.1477	0.1200	0.21155E-30	-0.87254E-31
53	725.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE.................. 0.000

DRAINAGE RATE...................... 0.000

MOISTURE ADDED TO PROFILE............ 52.777

MOISTURE INCREASE IN PROFILE......... 47.945

**********NORMAL TERMINATION AT TIME = 320.05718 DAYS AND STEP NUMBER = 750

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: C

```
################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#    SUMAT43    data source: PRZM OUTPUT                                       #
#    TRY  NODE WIDTH= 12.5,     TMAX:  320   FOR  AVG.  YEAR                   #
#         ATRAZINE,   CN: C                                                    #
#                                                                              #
################################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   53
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP..................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0


ATZ-AV-C      ###########################################################################

ELAPSED TIME      DAYS      HOURS       MINUTES        DELT                            ISTEP    NIT   NITT
              319.8916 7677.3979    0.4606E+06    0.5000E+00                            748      1   1895
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-300.67	1.00	-296.84	-293.60	0.0738	0.0745	0.0751	0.21809E-03	0.00000E+00
2	12.5	-290.83	0.62	-288.56	-286.79	0.0757	0.0761	0.0765	0.24506E-02	0.30758E-04
3	25.0	-285.38	0.31	-284.37	-283.83	0.0768	0.0770	0.0772	0.18380E-02	-0.39848E-04
4	37.5	-283.69	-0.01	-283.92	-284.61	0.0772	0.0771	0.0770	0.15228E-02	0.52630E-04
5	50.0	-285.92	-0.40	-286.24	-284.55	0.0767	0.0929	0.1236	0.20850E-02	0.12439E-04
6	62.5	-281.96	0.64	-279.27	-276.59	0.1408	0.1418	0.1428	0.27756E-02	0.76551E-04
7	75.0	-273.90	0.65	-271.19	-268.45	0.1438	0.1449	0.1460	0.41035E-02	0.12243E-03
8	87.5	-265.68	0.67	-262.87	-260.01	0.1471	0.1483	0.1495	0.49142E-02	-0.17798E-04
9	100.0	-257.11	0.70	-254.15	-251.14	0.1508	0.1521	0.1535	0.34756E-02	-0.19210E-03
10	112.5	-248.07	0.74	-244.94	-241.75	0.1550	0.1565	0.1581	0.11800E-02	-0.14274E-03
11	125.0	-238.50	0.79	-235.18	-231.81	0.1597	0.1615	0.1633	0.16553E-03	-0.30723E-04

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: C (Continue)

12	137.5	-228.38	0.83	-224.89	-221.35	0.1652	0.1672	0.1693	0.10919E-04	-0.25603E-05
13	150.0	-217.76	0.86	-214.11	-210.40	0.1715	0.1738	0.1762	0.54228E-06	-0.15152E-06
14	162.5	-206.73	0.87	-202.88	-199.50	0.1787	0.1772	0.1719	0.31484E-07	-0.10564E-07
15	175.0	-197.97	0.03	-198.06	-198.45	0.1689	0.1689	0.1685	0.18372E-09	-0.42937E-09
16	200.0	-198.51	0.04	-198.37	-198.22	0.1685	0.1686	0.1687	0.22832E-09	-0.10597E-09
17	212.5	-198.02	0.06	-197.75	-197.44	0.1689	0.1691	0.1693	-0.66070E-11	0.38582E-10
18	225.0	-197.10	0.09	-196.72	-196.32	0.1696	0.1699	0.1702	-0.20229E-10	0.12079E-10
19	237.5	-195.90	0.10	-195.45	-194.99	0.1706	0.1709	0.1713	-0.24016E-11	0.44156E-12
20	250.0	-194.51	0.12	-194.03	-193.53	0.1717	0.1721	0.1725	-0.12294E-13	-0.53402E-13
21	262.5	-193.03	0.12	-192.52	-192.00	0.1729	0.1733	0.1738	0.16098E-12	-0.85417E-13
22	275.0	-191.49	0.12	-190.97	-190.46	0.1742	0.1746	0.1751	-0.80675E-14	-0.33635E-14
23	287.5	-189.94	0.12	-189.43	-188.92	0.1755	0.1759	0.1764	-0.18284E-14	-0.16711E-14
24	300.0	-188.41	0.12	-187.91	-187.41	0.1768	0.1773	0.1777	0.94512E-15	-0.12489E-14
25	312.5	-186.92	0.12	-186.43	-185.95	0.1781	0.1786	0.1790	0.51983E-15	-0.28630E-15
26	325.0	-185.48	0.11	-185.00	-184.54	0.1794	0.1798	0.1803	0.53118E-16	0.22856E-16
27	337.5	-184.08	0.11	-183.63	-183.18	0.1807	0.1811	0.1815	-0.21694E-16	0.28267E-16
28	350.0	-182.74	0.11	-182.31	-181.88	0.1819	0.1823	0.1827	-0.10240E-16	0.75929E-17
29	362.5	-181.45	0.10	-181.03	-180.62	0.1831	0.1835	0.1839	-0.19114E-17	0.10868E-17
30	375.0	-180.21	0.10	-179.81	-179.42	0.1843	0.1847	0.1851	-0.80145E-19	0.17496E-18
31	387.5	-179.02	0.09	-178.64	-178.26	0.1855	0.1858	0.1862	-0.41377E-19	0.10783E-18
32	400.0	-177.88	0.09	-177.51	-177.14	0.1866	0.1869	0.1873	-0.45751E-19	0.51426E-19
33	412.5	-176.78	0.09	-176.42	-176.07	0.1877	0.1880	0.1884	-0.18015E-19	0.14411E-19
34	425.0	-175.72	0.08	-175.37	-175.03	0.1887	0.1891	0.1894	-0.38949E-20	0.24454E-20
35	437.5	-174.69	0.08	-174.36	-174.03	0.1898	0.1901	0.1904	-0.43092E-21	0.29168E-21
36	450.0	-173.71	0.08	-173.39	-173.07	0.1908	0.1911	0.1914	-0.36368E-22	0.81767E-22
37	462.5	-172.76	0.07	-172.45	-172.15	0.1917	0.1921	0.1924	-0.32645E-22	0.41823E-22
38	475.0	-171.85	0.07	-171.56	-171.27	0.1927	0.1930	0.1933	-0.18157E-22	0.10537E-22
39	487.5	-170.98	0.07	-170.70	-170.42	0.1936	0.1939	0.1942	-0.33203E-23	-0.16045E-23
40	500.0	-170.15	0.07	-169.88	-169.61	0.1945	0.1948	0.1951	0.10176E-23	-0.23900E-23
41	512.5	-169.35	0.06	-169.10	-168.85	0.1954	0.1956	0.1959	0.94152E-24	-0.10822E-23
42	525.0	-168.60	0.06	-168.36	-168.13	0.1962	0.1964	0.1967	0.36183E-24	-0.32101E-24
43	537.5	-167.90	0.05	-167.68	-167.47	0.1969	0.1972	0.1974	0.92505E-25	-0.70712E-25
44	550.0	-167.26	0.05	-167.05	-166.86	0.1977	0.1979	0.1981	0.17503E-25	-0.12794E-25
45	562.5	-166.68	0.04	-166.50	-166.33	0.1983	0.1985	0.1987	0.28407E-26	-0.24998E-26
46	575.0	-166.17	0.04	-166.03	-165.89	0.1989	0.1990	0.1992	0.63257E-27	-0.71530E-27
47	587.5	-165.77	0.03	-165.66	-165.57	0.1993	0.1994	0.1995	0.24029E-27	-0.22787E-27
48	600.0	-165.50	0.02	-165.41	-165.44	0.1996	0.1997	0.1997	0.95869E-28	-0.31520E-28
49	625.0	-165.54	-0.02	-165.87	-166.45	0.1996	0.1992	0.1986	0.14015E-28	-0.61780E-29
50	650.0	-167.09	-0.07	-168.44	-170.52	0.1978	0.1964	0.1941	0.34778E-29	-0.14915E-29
51	675.0	-172.21	-0.13	-177.08	-185.02	0.1923	0.1874	0.1798	0.83317E-30	-0.33020E-30
52	700.0	-189.37	-0.04	-229.51	-302.13	0.1760	0.1482	0.1201	0.17543E-30	-0.62842E-31
53	725.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 53.363
MOISTURE INCREASE IN PROFILE:........ 48.191

**********NORMAL TERMINATION AT TIME = 320.39158 DAYS AND STEP NUMBER = 749

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: A

```
################################################################################
*                                                                              *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 *
*                                                                              *
*    SUMAT43    data source: PRZM OUTPUT                                       *
*********   TRY  NODE WIDTH= 12.5,     TMAX:  265   FOR   LOW  YEAR            *
*           ATRAZINE,  LOW RAINFALL,   CN: A                                   *
*                                                                              *
################################################################################
```

INPUT PARAMETERS
================

```
NUMBER OF NODES.......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)..........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN..........................(RAINFALL CODE)..........    1
KDRAIN.........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
```

ATZ-LO-A ##

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	265.0360	6360.8631	0.3817E+06	0.5000E+00	627	1	1188

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-390.25	1.00	-386.17	-382.22	0.0624	0.0627	0.0631	0.26184E-02	0.00000E+00
2	12.5	-378.41	0.90	-374.71	-371.12	0.0634	0.0638	0.0641	0.37328E-02	0.12435E-03
3	25.0	-367.61	0.83	-364.18	-360.82	0.0645	0.0649	0.0652	0.58734E-02	0.35472E-04
4	37.5	-357.51	0.79	-354.26	-351.04	0.0656	0.0660	0.0663	0.32401E-02	-0.33131E-03
5	50.0	-347.87	0.76	-344.44	-340.62	0.0667	0.0815	0.1090	0.45619E-03	-0.93923E-04
6	62.5	-336.66	0.95	-332.72	-328.77	0.1244	0.1254	0.1264	0.20818E-04	-0.66267E-05
7	75.0	-324.84	0.94	-320.92	-317.00	0.1274	0.1285	0.1296	0.20925E-05	-0.32691E-06
8	87.5	-313.09	0.94	-309.19	-305.28	0.1307	0.1318	0.1330	0.58437E-06	-0.14393E-06
9	100.0	-301.38	0.94	-297.47	-293.57	0.1342	0.1355	0.1368	0.50266E-07	-0.14884E-07
10	112.5	-289.66	0.94	-285.76	-281.85	0.1381	0.1395	0.1409	-0.37951E-08	-0.31714E-09

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: A (Continue)

11	125.0	-277.93	0.94	-274.01	-270.09	0.1423	0.1438	0.1453	-0.22544E-08	0.17753E-09
12	137.5	-266.16	0.94	-262.22	-258.28	0.1469	0.1486	0.1503	0.22792E-09	-0.72551E-10
13	150.0	-254.34	0.94	-250.38	-246.40	0.1520	0.1539	0.1558	0.12547E-09	-0.24094E-10
14	162.5	-242.49	0.93	-238.45	-234.72	0.1577	0.1555	0.1496	0.27009E-11	-0.82272E-12
15	175.0	-232.26	0.36	-229.79	-228.03	0.1467	0.1480	0.1490	-0.12325E-11	0.20052E-12
16	200.0	-226.35	0.22	-225.49	-224.73	0.1499	0.1504	0.1509	-0.12981E-12	-0.13998E-12
17	212.5	-223.98	0.18	-223.26	-222.57	0.1513	0.1517	0.1521	-0.11290E-12	0.44860E-13
18	225.0	-221.91	0.16	-221.27	-220.66	0.1525	0.1529	0.1533	0.15353E-12	-0.74867E-13
19	237.5	-220.08	0.14	-219.51	-218.98	0.1536	0.1540	0.1543	-0.12749E-13	0.92623E-14
20	250.0	-218.46	0.12	-217.97	-217.50	0.1546	0.1549	0.1552	-0.51094E-14	0.51235E-14
21	262.5	-217.04	0.11	-216.61	-216.20	0.1555	0.1558	0.1561	-0.17660E-14	0.10030E-14
22	275.0	-215.81	0.09	-215.43	-215.07	0.1563	0.1565	0.1568	-0.17829E-15	-0.65679E-16
23	287.5	-214.73	0.08	-214.41	-214.11	0.1570	0.1572	0.1574	0.70447E-16	-0.84178E-16
24	300.0	-213.82	0.07	-213.55	-213.29	0.1576	0.1578	0.1579	0.31688E-16	-0.19397E-16
25	312.5	-213.05	0.06	-212.83	-212.62	0.1581	0.1582	0.1584	0.41740E-17	-0.69198E-18
26	325.0	-212.43	0.04	-212.26	-212.10	0.1585	0.1586	0.1587	-0.57967E-18	0.73069E-18
27	337.5	-211.97	0.03	-211.85	-211.74	0.1588	0.1589	0.1590	-0.30480E-18	0.14548E-18
28	350.0	-211.66	0.02	-211.60	-211.56	0.1590	0.1591	0.1591	-0.20138E-19	-0.26772E-19
29	362.5	-211.54	0.00	-211.55	-211.57	0.1591	0.1591	0.1591	0.17809E-19	-0.19155E-19
30	375.0	-211.63	-0.02	-211.71	-211.83	0.1590	0.1590	0.1589	0.68982E-20	-0.38303E-20
31	387.5	-211.97	-0.04	-212.15	-212.37	0.1588	0.1587	0.1585	0.86694E-21	0.25201E-21
32	400.0	-212.63	-0.07	-212.93	-213.27	0.1584	0.1582	0.1579	-0.24020E-21	0.42787E-21
33	412.5	-213.67	-0.10	-214.12	-214.63	0.1577	0.1574	0.1571	-0.16543E-21	0.16433E-21
34	425.0	-215.21	-0.15	-215.85	-216.57	0.1567	0.1563	0.1558	-0.52052E-22	0.40806E-22
35	437.5	-217.38	-0.20	-218.27	-219.27	0.1553	0.1547	0.1541	-0.11106E-22	0.68889E-23
36	450.0	-220.38	-0.28	-221.60	-222.96	0.1535	0.1527	0.1519	-0.15099E-23	0.46489E-24
37	462.5	-224.46	-0.38	-226.12	-227.96	0.1510	0.1501	0.1490	0.89374E-26	-0.20647E-24
38	475.0	-229.99	-0.51	-232.24	-234.72	0.1479	0.1467	0.1454	0.90639E-25	-0.11836E-24
39	487.5	-237.47	-0.69	-240.51	-243.87	0.1440	0.1425	0.1409	0.39397E-25	-0.41421E-25
40	500.0	-247.58	-0.93	-251.67	-256.17	0.1391	0.1373	0.1354	0.12582E-25	-0.12262E-25
41	512.5	-261.11	-1.24	-266.50	-272.34	0.1334	0.1313	0.1292	0.35711E-26	-0.33787E-26
42	525.0	-278.60	-1.55	-285.22	-292.08	0.1271	0.1249	0.1229	0.96497E-27	-0.90416E-27
43	537.5	-299.00	-1.66	-305.77	-312.15	0.1209	0.1191	0.1175	0.25618E-27	-0.24014E-27
44	550.0	-317.91	-1.29	-322.87	-326.98	0.1162	0.1150	0.1141	0.68039E-28	-0.63911E-28
45	562.5	-330.27	-0.69	-332.80	-334.74	0.1135	0.1129	0.1125	0.18157E-28	-0.17021E-28
46	575.0	-336.22	-0.31	-337.36	-338.27	0.1123	0.1120	0.1119	0.48543E-29	-0.44997E-29
47	587.5	-339.03	-0.17	-339.71	-340.34	0.1117	0.1116	0.1115	0.13416E-29	-0.11301E-29
48	600.0	-340.95	-0.15	-342.19	-341.63	0.1113	0.1111	0.1112	0.44174E-30	-0.13398E-30
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000

DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 20.448

MOISTURE INCREASE IN PROFILE......... 20.330

**********NORMAL TERMINATION AT TIME = 265.03596 DAYS AND STEP NUMBER = 627

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: B

```
********************************************************************************
*                                                                              *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 *
*                                                                              *
*    SUMAT43    data source: PRZM OUTPUT                                       *
*********   TRY  NODE WIDTH= 12.5,     TMAX:  265   FOR   LOW  YEAR            *
*           ATRAZINE,  LOW RAINFALL,   CN: B                                   *
*                                                                              *
********************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP..................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT..............(EPSI)...........   0.50000
ITERATION TOLERANCE................(TOL1)...........   0.50000
ITERATION TOLERANCE................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

ATZ-LO-B   *****************************************************************************************

ELAPSED TIME    DAYS      HOURS       MINUTES      DELT                              ISTEP    NIT   NITT
              264.9943 6359.8770   0.3816E+06   0.5000E+00                           627      1    1199
```

NODE	DEPTH	PRESSURE HEAD FUNCTN	GRAD	F(1/3)	F(2/3)	MOISTURE CONTENT FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-390.23	1.00	-386.14	-382.20	0.0624	0.0627	0.0631	0.25498E-02	0.00000E+00
2	12.5	-378.39	0.90	-374.69	-371.09	0.0634	0.0638	0.0641	0.36177E-02	0.86418E-04
3	25.0	-367.59	0.83	-364.16	-360.79	0.0645	0.0649	0.0652	0.63970E-02	0.32568E-04
4	37.5	-357.49	0.79	-354.23	-351.02	0.0656	0.0660	0.0663	0.33009E-02	-0.28615E-03
5	50.0	-347.85	0.76	-344.42	-340.60	0.0667	0.0815	0.1090	0.69923E-03	-0.14122E-03
6	62.5	-336.64	0.95	-332.69	-328.75	0.1244	0.1254	0.1264	0.14684E-04	-0.56867E-05
7	75.0	-324.82	0.94	-320.89	-316.98	0.1274	0.1285	0.1296	0.42934E-05	-0.12368E-05
8	87.5	-313.07	0.94	-309.16	-305.25	0.1307	0.1319	0.1330	-0.10603E-05	0.10548E-06
9	100.0	-301.35	0.94	-297.45	-293.54	0.1342	0.1355	0.1368	-0.43890E-07	0.24541E-09
10	112.5	-289.64	0.94	-285.73	-281.82	0.1381	0.1395	0.1409	-0.43741E-08	0.10143E-08

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: B (Continue)

11	125.0	-277.91	0.94	-273.99	-270.06	0.1423	0.1438	0.1454	-0.37517E-08	0.91075E-09
12	137.5	-266.13	0.94	-262.20	-258.25	0.1469	0.1486	0.1503	0.54075E-10	-0.63918E-10
13	150.0	-254.31	0.94	-250.35	-246.38	0.1521	0.1539	0.1558	0.16300E-09	-0.50352E-10
14	162.5	-242.46	0.93	-238.43	-234.70	0.1577	0.1555	0.1496	0.62534E-11	-0.19449E-11
15	175.0	-232.23	0.36	-229.76	-227.99	0.1467	0.1480	0.1490	-0.32101E-11	0.65535E-12
16	200.0	-226.31	0.22	-225.45	-224.68	0.1500	0.1505	0.1509	-0.24021E-12	-0.12458E-13
17	212.5	-223.94	0.18	-223.21	-222.52	0.1513	0.1518	0.1522	-0.33049E-13	0.12231E-12
18	225.0	-221.85	0.16	-221.21	-220.60	0.1526	0.1529	0.1533	0.67772E-13	-0.60577E-13
19	237.5	-220.01	0.14	-219.44	-218.90	0.1537	0.1540	0.1544	-0.71504E-14	-0.35995E-15
20	250.0	-218.38	0.12	-217.88	-217.40	0.1547	0.1550	0.1553	-0.11572E-14	0.31214E-14
21	262.5	-216.94	0.11	-216.51	-216.09	0.1556	0.1559	0.1561	-0.14897E-14	0.13612E-14
22	275.0	-215.69	0.09	-215.30	-214.94	0.1564	0.1566	0.1569	-0.43158E-15	0.18928E-15
23	287.5	-214.59	0.08	-214.26	-213.94	0.1571	0.1573	0.1575	-0.19554E-16	-0.40047E-16
24	300.0	-213.64	0.07	-213.36	-213.09	0.1577	0.1579	0.1581	0.24829E-16	-0.24507E-16
25	312.5	-212.84	0.06	-212.61	-212.39	0.1582	0.1584	0.1585	0.82554E-17	-0.50349E-17
26	325.0	-212.18	0.05	-212.00	-211.82	0.1587	0.1588	0.1589	0.97795E-18	-0.25724E-18
27	337.5	-211.67	0.04	-211.53	-211.41	0.1590	0.1591	0.1592	-0.92681E-19	0.97402E-19
28	350.0	-211.31	0.02	-211.23	-211.16	0.1593	0.1593	0.1594	-0.38453E-19	0.55815E-20
29	362.5	-211.12	0.01	-211.10	-211.10	0.1594	0.1594	0.1594	0.41312E-20	-0.10416E-19
30	375.0	-211.13	-0.01	-211.18	-211.26	0.1594	0.1593	0.1593	0.48059E-20	-0.37097E-20
31	387.5	-211.37	-0.03	-211.51	-211.68	0.1592	0.1591	0.1590	0.11727E-20	-0.26239E-21
32	400.0	-211.90	-0.06	-212.15	-212.44	0.1589	0.1587	0.1585	-0.21657E-22	0.27515E-21
33	412.5	-212.79	-0.09	-213.18	-213.62	0.1583	0.1580	0.1577	-0.12118E-21	0.15553E-21
34	425.0	-214.13	-0.13	-214.70	-215.34	0.1574	0.1570	0.1566	-0.53819E-22	0.51065E-22
35	437.5	-216.05	-0.18	-216.85	-217.74	0.1561	0.1556	0.1551	-0.15524E-22	0.12362E-22
36	450.0	-218.73	-0.25	-219.83	-221.05	0.1545	0.1538	0.1530	-0.33669E-23	0.22295E-23
37	462.5	-222.40	-0.34	-223.89	-225.55	0.1522	0.1514	0.1504	-0.52401E-24	0.22553E-24
38	475.0	-227.38	-0.46	-229.41	-231.66	0.1494	0.1482	0.1470	-0.28013E-25	-0.36672E-25
39	487.5	-234.14	-0.63	-236.89	-239.93	0.1457	0.1443	0.1428	0.19587E-25	-0.31493E-25
40	500.0	-243.29	-0.85	-247.01	-251.11	0.1411	0.1394	0.1376	0.10925E-25	-0.12776E-25
41	512.5	-255.63	-1.14	-260.59	-266.01	0.1356	0.1336	0.1315	0.40152E-26	-0.42370E-26
42	525.0	-271.89	-1.46	-278.21	-284.90	0.1294	0.1272	0.1250	0.12748E-26	-0.12820E-26
43	537.5	-291.83	-1.68	-298.85	-305.71	0.1230	0.1210	0.1191	0.37607E-27	-0.37027E-27
44	550.0	-312.19	-1.49	-318.02	-323.05	0.1175	0.1161	0.1150	0.10726E-27	-0.10488E-27
45	562.5	-327.23	-0.89	-330.53	-333.11	0.1141	0.1134	0.1129	0.30287E-28	-0.29505E-28
46	575.0	-335.07	-0.41	-336.57	-337.74	0.1125	0.1122	0.1120	0.85503E-29	-0.82307E-29
47	587.5	-338.67	-0.20	-339.47	-340.19	0.1118	0.1116	0.1115	0.25127E-29	-0.21730E-29
48	600.0	-340.85	-0.16	-342.16	-341.62	0.1114	0.1111	0.1112	0.87242E-30	-0.26482E-30
49	625.0	-336.50	1.00			0.1122			0.000 0.000	

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 20.693
MOISTURE INCREASE IN PROFILE......... 20.596

**********NORMAL TERMINATION AT TIME = 265.49487 DAYS AND STEP NUMBER = 628

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: C

```
################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#    SUMAT43    data source: PRZM OUTPUT                                       #
#########   TRY  NODE WIDTH= 12.5,     TMAX:  265   FOR   LOW  YEAR            #
#          ATRAZINE,  LOW RAINFALL,   CN: C                                    #
#                                                                              #
################################################################################
```

```
INPUT PARAMETERS
================
NUMBER OF NODES.......................(NN)...............   49
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 265.00000
PRINT DELT FOR OUTPUT..............(PRDEL)...........  53.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........   1
KDRAIN........................(DRAINAGE CODE)..........   2
KOD1.............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3..............(WRITE MATERIAL PROPERTIES)..........   4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0
```

ATZ-LO-C ##

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	264.9949	6359.8770	0.3816E+06	0.5000E+00	627	1	1197

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-390.18	1.00	-386.09	-382.15	0.0624	0.0627	0.0631	0.25954E-02	0.00000E+00
2	12.5	-378.34	0.90	-374.64	-371.04	0.0634	0.0638	0.0642	0.36401E-02	0.76546E-04
3	25.0	-367.53	0.83	-364.10	-360.74	0.0645	0.0649	0.0652	0.65161E-02	0.49341E-04
4	37.5	-357.44	0.79	-354.18	-350.97	0.0656	0.0660	0.0663	0.33810E-02	-0.29716E-03
5	50.0	-347.79	0.76	-344.36	-340.54	0.0667	0.0815	0.1090	0.74064E-03	-0.14433E-03
6	62.5	-336.58	0.95	-332.64	-328.69	0.1244	0.1254	0.1264	0.18784E-04	-0.66468E-05
7	75.0	-324.76	0.94	-320.84	-316.92	0.1274	0.1285	0.1296	0.50254E-05	-0.12858E-05
8	87.5	-313.01	0.94	-309.10	-305.20	0.1307	0.1319	0.1330	-0.11160E-05	0.97087E-07
9	100.0	-301.30	0.94	-297.39	-293.49	0.1343	0.1355	0.1368	-0.43490E-07	0.91713E-09

PRZM+FEM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: C (Continue)

10	112.5	-289.58	0.94	-285.68	-281.77	0.1381	0.1395	0.1409	-0.46151E-08	0.14383E-08
11	125.0	-277.85	0.94	-273.93	-270.01	0.1423	0.1438	0.1454	-0.40444E-08	0.91396E-09
12	137.5	-266.08	0.94	-262.14	-258.20	0.1470	0.1486	0.1503	0.70151E-10	-0.84839E-10
13	150.0	-254.26	0.94	-250.30	-246.32	0.1521	0.1539	0.1558	0.17125E-09	-0.50294E-10
14	162.5	-242.40	0.93	-238.37	-234.64	0.1577	0.1556	0.1497	0.56498E-11	-0.14273E-11
15	175.0	-232.18	0.36	-229.71	-227.93	0.1467	0.1481	0.1490	-0.31331E-11	0.64149E-12
16	200.0	-226.25	0.22	-225.39	-224.62	0.1500	0.1505	0.1509	-0.22734E-12	-0.37277E-13
17	212.5	-223.87	0.18	-223.14	-222.44	0.1514	0.1518	0.1522	-0.71620E-13	0.11018E-12
18	225.0	-221.78	0.16	-221.13	-220.52	0.1526	0.1530	0.1534	0.98692E-13	-0.70555E-13
19	237.5	-219.93	0.14	-219.36	-218.81	0.1537	0.1541	0.1544	-0.79808E-14	0.16250E-14
20	250.0	-218.29	0.12	-217.79	-217.31	0.1547	0.1551	0.1554	-0.23450E-14	0.41410E-14
21	262.5	-216.84	0.11	-216.40	-215.98	0.1556	0.1559	0.1562	-0.18130E-14	0.14887E-14
22	275.0	-215.58	0.09	-215.19	-214.82	0.1565	0.1567	0.1569	-0.43527E-15	0.15249E-15
23	287.5	-214.47	0.08	-214.13	-213.81	0.1572	0.1574	0.1576	0.15587E-17	-0.57696E-16
24	300.0	-213.51	0.07	-213.22	-212.95	0.1578	0.1580	0.1582	0.30283E-16	-0.26653E-16
25	312.5	-212.69	0.06	-212.45	-212.22	0.1583	0.1585	0.1586	0.83070E-17	-0.45857E-17
26	325.0	-212.01	0.05	-211.81	-211.63	0.1588	0.1589	0.1590	0.69703E-18	-0.65405E-19
27	337.5	-211.47	0.04	-211.32	-211.19	0.1591	0.1592	0.1593	-0.14667E-18	0.10087E-18
28	350.0	-211.08	0.02	-210.98	-210.91	0.1594	0.1595	0.1595	-0.29882E-19	-0.91306E-20
29	362.5	-210.85	0.01	-210.82	-210.81	0.1596	0.1596	0.1596	0.10492E-19	-0.14906E-19
30	375.0	-210.82	-0.01	-210.85	-210.92	0.1596	0.1596	0.1595	0.60610E-20	-0.39463E-20
31	387.5	-211.01	-0.03	-211.13	-211.29	0.1595	0.1594	0.1593	0.10968E-20	0.21948E-22
32	400.0	-211.47	-0.05	-211.70	-211.97	0.1591	0.1590	0.1588	-0.14716E-21	0.40568E-21
33	412.5	-212.28	-0.08	-212.64	-213.06	0.1586	0.1584	0.1581	-0.16444E-21	0.18783E-21
34	425.0	-213.53	-0.12	-214.06	-214.65	0.1578	0.1574	0.1570	-0.62514E-22	0.55518E-22
35	437.5	-215.32	-0.17	-216.07	-216.91	0.1566	0.1561	0.1556	-0.16282E-22	0.12162E-22
36	450.0	-217.84	-0.24	-218.87	-220.02	0.1550	0.1544	0.1537	-0.31583E-23	0.18819E-23
37	462.5	-221.29	-0.32	-222.71	-224.27	0.1529	0.1521	0.1511	-0.39598E-24	0.91553E-25
38	475.0	-226.00	-0.44	-227.92	-230.04	0.1501	0.1491	0.1479	0.13673E-25	-0.74347E-25
39	487.5	-232.39	-0.59	-234.98	-237.86	0.1466	0.1452	0.1438	0.30352E-25	-0.40543E-25
40	500.0	-241.04	-0.80	-244.56	-248.45	0.1422	0.1405	0.1387	0.13380E-25	-0.14756E-25
41	512.5	-252.75	-1.08	-257.48	-262.66	0.1369	0.1349	0.1328	0.45338E-26	-0.46470E-26
42	525.0	-268.31	-1.41	-274.42	-280.95	0.1307	0.1285	0.1263	0.13809E-26	-0.13639E-26
43	537.5	-287.81	-1.68	-294.86	-301.89	0.1241	0.1221	0.1201	0.39702E-27	-0.38551E-27
44	550.0	-308.67	-1.58	-314.93	-320.47	0.1184	0.1169	0.1156	0.11100E-27	-0.10730E-27
45	562.5	-325.17	-1.02	-328.96	-331.95	0.1145	0.1137	0.1131	0.30828E-28	-0.29739E-28
46	575.0	-334.24	-0.48	-335.99	-337.35	0.1126	0.1123	0.1120	0.85810E-29	-0.81913E-29
47	587.5	-338.41	-0.23	-339.30	-340.07	0.1118	0.1117	0.1115	0.24878E-29	-0.21401E-29
48	600.0	-340.78	-0.16	-342.13	-341.62	0.1114	0.1111	0.1112	0.85474E-30	-0.25942E-30
49	625.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 20.844
MOISTURE INCREASE IN PROFILE......... 20.754

**********NORMAL TERMINATION AT TIME = 265.49487 DAYS AND STEP NUMBER = 628

APPENDIX G

GLEAMS+FEM OUTPUT OF PESTICIDE CONCENTRATION

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: A

```
################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#    SUMAT53    data source: GLEAMS OUTPUT                                     #
#    NODE WIDTH= 12.5,      TMAX:  312    FOR HIGH YEAR                        #
#    DICAMBA,  HIGH RAINFALL,  CN: A                                           #
################################################################################
```

```
INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   61
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 312.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 156.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........   1
KDRAIN........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3...............(WRITE MATERIAL PROPERTIES)..........   4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0

GLEAMS-DCM-HI-A   ##########################################################################

ELAPSED TIME    DAYS      HOURS      MINUTES       DELT                 ISTEP   NIT   NITT
              312.0358 7488.8587   0.4493E+06   0.5000E+00               756     1    1853
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-358.05	1.00	-353.99	-350.13	0.0655	0.0660	0.0664	0.10769E-09	0.00000E+00
2	12.5	-346.44	0.87	-342.90	-339.49	0.0669	0.0673	0.0678	-0.73565E-09	-0.16318E-09
3	25.0	-336.21	0.78	-333.02	-329.92	0.0682	0.0686	0.0690	-0.88369E-08	-0.12285E-08
4	37.5	-326.90	0.72	-323.93	-321.02	0.0695	0.0699	0.0704	-0.29610E-07	-0.14602E-08
5	50.0	-318.16	0.68	-315.00	-311.33	0.0708	0.0866	0.1158	-0.21780E-07	0.45354E-08
6	62.5	-307.47	0.92	-303.63	-299.78	0.1324	0.1335	0.1347	0.41454E-07	0.15766E-08
7	75.0	-295.95	0.92	-292.13	-288.31	0.1360	0.1373	0.1386	-0.12147E-07	-0.67367E-08
8	87.5	-284.49	0.92	-280.68	-276.87	0.1399	0.1413	0.1427	-0.20338E-07	0.49911E-08
9	100.0	-273.06	0.92	-269.24	-265.42	0.1442	0.1457	0.1472	0.35819E-07	0.24896E-08
10	112.5	-261.60	0.92	-257.77	-253.93	0.1489	0.1505	0.1522	0.35385E-07	-0.72924E-09
11	125.0	-250.09	0.92	-246.24	-242.38	0.1540	0.1558	0.1577	0.64002E-07	0.11027E-07
12	137.5	-238.51	0.93	-234.63	-230.74	0.1597	0.1618	0.1639	0.43107E-06	0.58718E-07
13	150.0	-226.85	0.93	-222.94	-219.00	0.1661	0.1684	0.1707	0.11689E-05	0.65605E-07

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: A (Continue)

14	162.5	-215.12	0.92	-211.13	-207.46	0.1732	0.1715	0.1661	0.78608E-06	-0.52914E-07
15	175.0	-205.08	0.34	-202.70	-200.88	0.1636	0.1653	0.1667	-0.62305E-06	-0.77779E-07
16	200.0	-199.14	0.22	-198.27	-197.46	0.1680	0.1687	0.1693	-0.61967E-06	0.40337E-07
17	212.5	-196.67	0.19	-195.90	-195.15	0.1700	0.1706	0.1712	-0.21053E-06	0.26681E-07
18	225.0	-194.43	0.17	-193.72	-193.04	0.1718	0.1723	0.1729	0.43496E-09	0.11400E-07
19	237.5	-192.37	0.16	-191.72	-191.09	0.1734	0.1740	0.1745	0.80471E-07	0.14867E-07
20	250.0	-190.48	0.15	-189.87	-189.29	0.1750	0.1756	0.1761	0.65137E-06	0.11542E-06
21	262.5	-188.71	0.14	-188.15	-187.60	0.1766	0.1770	0.1775	0.42858E-05	0.56575E-06
22	275.0	-187.07	0.13	-186.54	-186.02	0.1780	0.1785	0.1789	0.18352E-04	0.18751E-05
23	287.5	-185.52	0.12	-185.02	-184.53	0.1794	0.1798	0.1803	0.57980E-04	0.47738E-05
24	300.0	-184.05	0.11	-183.58	-183.12	0.1807	0.1811	0.1816	0.15034E-03	0.10494E-04
25	312.5	-182.66	0.11	-182.22	-181.77	0.1820	0.1824	0.1828	0.33789E-03	0.19795E-04
26	325.0	-181.34	0.10	-180.91	-180.49	0.1832	0.1836	0.1840	0.64059E-03	0.27450E-04
27	337.5	-180.07	0.10	-179.66	-179.25	0.1844	0.1848	0.1852	0.96264E-03	0.21292E-04
28	350.0	-178.85	0.10	-178.46	-178.07	0.1856	0.1860	0.1864	0.10936E-02	-0.19162E-05
29	362.5	-177.68	0.09	-177.30	-176.92	0.1868	0.1871	0.1875	0.91342E-03	-0.25045E-04
30	375.0	-176.55	0.09	-176.18	-175.82	0.1879	0.1883	0.1886	0.55082E-03	-0.29856E-04
31	387.5	-175.46	0.09	-175.11	-174.76	0.1890	0.1893	0.1897	0.23655E-03	-0.19261E-04
32	400.0	-174.41	0.08	-174.07	-173.73	0.1900	0.1904	0.1907	0.72060E-04	-0.77602E-05
33	412.5	-173.39	0.08	-173.06	-172.73	0.1911	0.1914	0.1918	0.15889E-04	-0.20788E-05
34	425.0	-172.41	0.08	-172.09	-171.77	0.1921	0.1924	0.1928	0.26631E-05	-0.40189E-06
35	437.5	-171.46	0.07	-171.15	-170.85	0.1931	0.1934	0.1938	0.34650E-06	-0.60522E-07
36	450.0	-170.55	0.07	-170.25	-169.95	0.1941	0.1944	0.1947	0.32513E-07	-0.68430E-08
37	462.5	-169.66	0.07	-169.38	-169.09	0.1950	0.1953	0.1956	0.19750E-08	-0.53658E-09
38	475.0	-168.81	0.07	-168.54	-168.26	0.1959	0.1963	0.1965	0.70094E-10	-0.31045E-10
39	487.5	-167.99	0.06	-167.73	-167.47	0.1968	0.1971	0.1974	-0.57747E-12	-0.16647E-11
40	500.0	-167.21	0.06	-166.95	-166.70	0.1977	0.1980	0.1983	-0.60270E-12	-0.48355E-13
41	512.5	-166.46	0.06	-166.21	-165.97	0.1985	0.1988	0.1991	-0.94873E-13	0.42644E-14
42	525.0	-165.74	0.06	-165.51	-165.28	0.1994	0.1996	0.1999	-0.10042E-13	0.58493E-15
43	537.5	-165.06	0.05	-164.84	-164.62	0.2001	0.2004	0.2006	-0.14789E-14	0.20898E-15
44	550.0	-164.41	0.05	-164.21	-164.01	0.2009	0.2011	0.2013	-0.22013E-15	0.14638E-16
45	562.5	-163.81	0.05	-163.62	-163.43	0.2015	0.2018	0.2020	-0.44092E-16	0.35787E-17
46	575.0	-163.25	0.04	-163.08	-162.91	0.2022	0.2024	0.2026	-0.13840E-16	0.26060E-17
47	587.5	-162.75	0.04	-162.59	-162.44	0.2028	0.2030	0.2031	0.55151E-18	0.19599E-18
48	600.0	-162.30	0.03	-162.04	-161.81	0.2033	0.2036	0.2039	0.11266E-17	-0.12080E-18
49	625.0	-161.62	0.02	-161.47	-161.38	0.2041	0.2043	0.2044	0.55550E-20	0.14419E-20
50	650.0	-161.34	0.00	-161.37	-161.48	0.2044	0.2044	0.2043	-0.20008E-20	0.10236E-20
51	675.0	-161.68	-0.03	-161.99	-162.44	0.2040	0.2037	0.2031	-0.64585E-21	0.28012E-21
52	700.0	-163.06	-0.08	-163.86	-164.91	0.2024	0.2015	0.2003	-0.16464E-21	0.59854E-22
53	725.0	-166.27	-0.18	-167.99	-170.20	0.1988	0.1968	0.1945	-0.31714E-22	0.78248E-23
54	750.0	-173.03	-0.38	-176.66	-181.40	0.1915	0.1878	0.1832	-0.26811E-23	-0.66851E-24
55	775.0	-187.60	-0.85	-196.05	-207.85	0.1775	0.1704	0.1616	0.98864E-24	-0.82644E-24
56	800.0	-223.86	-2.21	-249.82	-284.31	0.1514	0.1381	0.1252	0.59395E-24	-0.32659E-24

INFILTRATION RATE................ 0.000

DRAINAGE RATE..................... 0.000

MOISTURE ADDED TO PROFILE............ 56.789

MOISTURE INCREASE IN PROFILE......... 56.479

**********NORMAL TERMINATION AT TIME = 312.03578 DAYS AND STEP NUMBER = 756

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: B

```
################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#    SUMAT53    data source: GLEAMS OUTPUT                                     #
#    NODE WIDTH= 12.5,     TMAX:  312   FOR HIGH YEAR                          #
#    DICAMBA,  HIGH RAINFALL,  CN: B                                           #
#                                                                              #
################################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............    61
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 312.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 156.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..:.......................(RAINFALL CODE)..........    1
KDRAIN.........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

GLEAMS-DCM-HI-B  ##############################################################################

ELAPSED TIME      DAYS      HOURS        MINUTES       DELT                         ISTEP    NIT   NITT
              312.1335 7491.2030    0.4495E+06   0.5000E+00                        757      1   1846
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-358.09	1.00	-354.03	-350.16	0.0655	0.0660	0.0664	0.13754E-09	0.00000E+00
2	12.5	-346.47	0.87	-342.93	-339.53	0.0669	0.0673	0.0677	-0.93328E-09	-0.10934E-09
3	25.0	-336.24	0.78	-333.05	-329.95	0.0682	0.0686	0.0690	-0.85019E-08	-0.12867E-08
4	37.5	-326.93	0.72	-323.96	-321.04	0.0695	0.0699	0.0703	-0.34175E-07	-0.21675E-08
5	50.0	-318.19	0.68	-315.02	-311.35	0.0708	0.0866	0.1158	-0.31199E-07	0.58368E-08
6	62.5	-307.50	0.92	-303.65	-299.80	0.1323	0.1335	0.1347	0.67501E-07	0.29141E-08
7	75.0	-295.97	0.92	-292.15	-288.33	0.1360	0.1372	0.1386	-0.32120E-07	-0.12414E-07
8	87.5	-284.51	0.92	-280.70	-276.89	0.1399	0.1413	0.1427	-0.27615E-07	0.11136E-07
9	100.0	-273.08	0.92	-269.26	-265.44	0.1442	0.1457	0.1472	0.52007E-07	-0.99383E-09
10	112.5	-261.62	0.92	-257.79	-253.95	0.1488	0.1505	0.1522	0.51719E-08	-0.29206E-08
11	125.0	-250.11	0.92	-246.26	-242.40	0.1540	0.1558	0.1577	0.51102E-07	0.13717E-07
12	137.5	-238.53	0.93	-234.65	-230.76	0.1597	0.1618	0.1639	0.36646E-06	0.38568E-07
13	150.0	-226.87	0.93	-222.95	-219.02	0.1661	0.1683	0.1707	0.74406E-06	0.26375E-07

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: B (Continue)

14	162.5	-215.14	0.92	-211.15	-207.48	0.1731	0.1715	0.1661	0.50056E-06	-0.25709E-07
15	175.0	-205.10	0.34	-202.72	-200.89	0.1636	0.1653	0.1667	-0.20782E-06	-0.45067E-07
16	200.0	-199.15	0.22	-198.28	-197.46	0.1680	0.1687	0.1693	-0.57112E-06	0.19889E-07
17	212.5	-196.68	0.19	-195.90	-195.16	0.1699	0.1706	0.1712	-0.25453E-06	0.28238E-07
18	225.0	-194.43	0.17	-193.73	-193.04	0.1717	0.1723	0.1729	-0.11108E-07	0.12978E-07
19	237.5	-192.38	0.16	-191.73	-191.09	0.1734	0.1740	0.1745	0.64105E-07	0.11084E-07
20	250.0	-190.48	0.15	-189.87	-189.29	0.1750	0.1756	0.1761	0.48026E-06	0.88940E-07
21	262.5	-188.71	0.14	-188.15	-187.60	0.1766	0.1770	0.1775	0.33891E-05	0.46556E-06
22	275.0	-187.06	0.13	-186.53	-186.02	0.1780	0.1785	0.1789	0.15323E-04	0.16214E-05
23	287.5	-185.51	0.12	-185.01	-184.53	0.1794	0.1798	0.1803	0.50222E-04	0.42507E-05
24	300.0	-184.05	0.11	-183.57	-183.11	0.1807	0.1812	0.1816	0.13326E-03	0.95044E-05
25	312.5	-182.65	0.11	-182.21	-181.76	0.1820	0.1824	0.1828	0.30550E-03	0.18422E-04
26	325.0	-181.33	0.10	-180.90	-180.48	0.1832	0.1837	0.1841	0.59453E-03	0.26893E-04
27	337.5	-180.06	0.10	-179.65	-179.24	0.1845	0.1849	0.1852	0.92392E-03	0.23138E-04
28	350.0	-178.84	0.10	-178.44	-178.05	0.1856	0.1860	0.1864	0.10308E-02	0.16405E-05
29	362.5	-177.67	0.09	-177.29	-176.91	0.1868	0.1872	0.1875	0.94983E-03	-0.22761E-04
30	375.0	-176.54	0.09	-176.17	-175.81	0.1879	0.1883	0.1886	0.59844E-03	-0.30296E-04
31	387.5	-175.45	0.09	-175.09	-174.74	0.1890	0.1894	0.1897	0.26894E-03	-0.20932E-04
32	400.0	-174.39	0.08	-174.05	-173.71	0.1901	0.1904	0.1908	0.85711E-04	-0.89404E-05
33	412.5	-173.38	0.08	-173.04	-172.72	0.1911	0.1915	0.1918	0.19698E-04	-0.25187E-05
34	425.0	-172.39	0.08	-172.07	-171.76	0.1921	0.1925	0.1928	0.34235E-05	-0.50643E-06
35	437.5	-171.44	0.07	-171.13	-170.83	0.1931	0.1935	0.1938	0.46404E-06	-0.79112E-07
36	450.0	-170.53	0.07	-170.23	-169.93	0.1941	0.1944	0.1947	0.46042E-07	-0.94011E-08
37	462.5	-169.64	0.07	-169.35	-169.07	0.1951	0.1954	0.1957	0.29873E-08	-0.77760E-09
38	475.0	-168.79	0.07	-168.51	-168.24	0.1960	0.1963	0.1966	0.11331E-09	-0.46025E-10
39	487.5	-167.97	0.06	-167.70	-167.44	0.1969	0.1972	0.1975	-0.74133E-14	-0.24358E-11
40	500.0	-167.18	0.06	-166.92	-166.67	0.1977	0.1980	0.1983	-0.79983E-12	-0.75127E-13
41	512.5	-166.42	0.06	-166.18	-165.94	0.1986	0.1989	0.1991	-0.13502E-12	0.50342E-14
42	525.0	-165.70	0.06	-165.47	-165.24	0.1994	0.1997	0.1999	-0.15890E-13	0.12064E-14
43	537.5	-165.02	0.05	-164.80	-164.58	0.2002	0.2004	0.2007	-0.25110E-14	0.32885E-15
44	550.0	-164.37	0.05	-164.16	-163.96	0.2009	0.2011	0.2014	-0.33785E-15	0.22879E-16
45	562.5	-163.76	0.05	-163.57	-163.38	0.2016	0.2018	0.2020	-0.78951E-16	0.86555E-17
46	575.0	-163.20	0.04	-163.02	-162.85	0.2023	0.2025	0.2027	-0.28157E-16	0.33948E-17
47	587.5	-162.68	0.04	-162.52	-162.37	0.2029	0.2030	0.2032	-0.34586E-17	0.60170E-18
48	600.0	-162.22	0.03	-161.95	-161.71	0.2034	0.2037	0.2040	0.55238E-18	-0.51560E-20
49	625.0	-161.51	0.02	-161.35	-161.23	0.2042	0.2044	0.2046	-0.99228E-20	0.68493E-20
50	650.0	-161.17	0.00	-161.18	-161.26	0.2046	0.2046	0.2045	-0.44123E-20	0.16845E-20
51	675.0	-161.43	-0.03	-161.70	-162.10	0.2043	0.2040	0.2035	-0.88713E-21	0.29282E-21
52	700.0	-162.65	-0.08	-163.38	-164.33	0.2029	0.2020	0.2009	-0.14104E-21	0.28555E-22
53	725.0	-165.57	-0.17	-167.15	-169.17	0.1995	0.1978	0.1956	-0.62125E-23	-0.65057E-23
54	750.0	-171.76	-0.35	-175.07	-179.37	0.1928	0.1894	0.1851	0.68441E-23	-0.48003E-23
55	775.0	-185.00	-0.77	-192.53	-202.94	0.1799	0.1733	0.1652	0.33746E-23	-0.16852E-23
56	800.0	-217.19	-1.98	-239.43	-270.69	0.1554	0.1430	0.1298	0.10021E-23	-0.45572E-24
57	825.0	-307.25	-4.56	-331.37	-336.76	0.1187	0.1132	0.1121	0.24698E-24	-0.11900E-24
58	850.0	-336.92	-0.24	-338.14	-338.43	0.1121	0.1119	0.1118	0.68223E-25	-0.32711E-25

INFILTRATION RATE................ 0.000 MOISTURE ADDED TO PROFILE............ 57.075

DRAINAGE RATE.................... 0.000 MOISTURE INCREASE IN PROFILE......... 56.798

**********NORMAL TERMINATION AT TIME = 312.13346 DAYS AND STEP NUMBER = 757

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: C

```
******************************************************************************
*                                                                            *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                               *
*                                                                            *
*    SUMAT53    data source: GLEAMS OUTPUT                                   *
*    NODE WIDTH= 12.5,     TMAX:  312   FOR HIGH YEAR                        *
*    DICAMBA,  HIGH RAINFALL,  CN: C                                         *
*                                                                            *
******************************************************************************
```

```
INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............  58
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP..................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME............(TMAX)........... 312.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 156.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN..........................(RAINFALL CODE)..........   1
KDRAIN.........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3...............(WRITE MATERIAL PROPERTIES)..........   4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0
```

GLEAMS-DCM-HI-C **

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	312.2196	7433.2694	0.4496E+06	0.5000E+00	759	1	1865

		PRESSURE HEAD				MOISTURE CONTENT			CONCENTRATION	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-358.14	1.00	-354.08	-350.22	0.0655	0.0660	0.0664	-0.24838E-09	0.00000E+00
2	12.5	-346.52	0.87	-342.98	-339.58	0.0669	0.0673	0.0677	-0.11599E-08	-0.11512E-09
3	25.0	-336.29	0.78	-333.10	-329.99	0.0682	0.0686	0.0690	-0.41304E-08	-0.35386E-09
4	37.5	-326.97	0.72	-324.00	-321.08	0.0695	0.0699	0.0703	-0.13934E-07	-0.10295E-08
5	50.0	-318.23	0.68	-315.05	-311.39	0.0708	0.0865	0.1158	-0.10070E-07	0.38695E-08
6	62.5	-307.53	0.92	-303.68	-299.84	0.1323	0.1335	0.1347	0.38350E-07	-0.74566E-09
7	75.0	-296.00	0.92	-292.18	-288.36	0.1360	0.1372	0.1385	-0.37378E-07	-0.61259E-08
8	87.5	-284.54	0.92	-280.73	-276.92	0.1399	0.1413	0.1427	-0.99042E-08	0.81433E-08
9	100.0	-273.10	0.92	-269.29	-265.47	0.1442	0.1457	0.1472	0.55717E-07	0.11524E-08
10	112.5	-261.64	0.92	-257.81	-253.98	0.1488	0.1505	0.1522	0.34093E-07	-0.27274E-08
11	125.0	-250.13	0.92	-246.28	-242.42	0.1540	0.1558	0.1577	0.35992E-07	0.80428E-08
12	137.5	-238.55	0.93	-234.67	-230.78	0.1597	0.1617	0.1639	0.34819E-06	0.49595E-07

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under High Rainfall Year And CN: C (Continue)

13	150.0	-226.89	0.93	-222.98	-219.05	0.1660	0.1683	0.1707	0.91055E-06	0.41880E-07
14	162.5	-215.16	0.92	-211.18	-207.50	0.1731	0.1715	0.1661	0.46694E-06	-0.53122E-07
15	175.0	-205.05	0.37	-203.78	-202.83	0.1636	0.1645	0.1652	-0.52641E-06	-0.36560E-07
16	187.5	-201.90	0.25	-200.93	-200.04	0.1659	0.1667	0.1673	-0.64511E-06	0.17035E-07
17	200.0	-199.17	0.21	-198.32	-197.50	0.1680	0.1687	0.1693	-0.41004E-06	0.18760E-07
18	212.5	-196.71	0.19	-195.94	-195.19	0.1699	0.1705	0.1711	-0.18271E-06	0.18679E-07
19	225.0	-194.47	0.17	-193.76	-193.07	0.1717	0.1723	0.1729	-0.15127E-07	0.10795E-07
20	237.5	-192.41	0.16	-191.76	-191.12	0.1734	0.1740	0.1745	0.69951E-07	0.13734E-07
21	250.0	-190.51	0.15	-189.90	-189.32	0.1750	0.1755	0.1760	0.50588E-06	0.87254E-07
22	262.5	-188.74	0.14	-188.18	-187.63	0.1765	0.1770	0.1775	0.32670E-05	0.43916E-06
23	275.0	-187.09	0.13	-186.56	-186.04	0.1780	0.1784	0.1789	0.14532E-04	0.15359E-05
24	287.5	-185.54	0.12	-185.04	-184.55	0.1794	0.1798	0.1803	0.47848E-04	0.40803E-05
25	300.0	-184.07	0.11	-183.60	-183.14	0.1807	0.1811	0.1816	0.12794E-03	0.91921E-05
26	312.5	-182.68	0.11	-182.23	-181.79	0.1820	0.1824	0.1828	0.29510E-03	0.17946E-04
27	325.0	-181.35	0.10	-180.92	-180.50	0.1832	0.1836	0.1840	0.57942E-03	0.26720E-04
28	337.5	-180.08	0.10	-179.67	-179.26	0.1844	0.1848	0.1852	0.91180E-03	0.23796E-04
29	350.0	-178.86	0.10	-178.47	-178.08	0.1856	0.1860	0.1864	0.10897E-02	0.26096E-05
30	362.5	-177.69	0.09	-177.31	-176.93	0.1868	0.1871	0.1875	0.95846E-03	-0.22233E-04
31	375.0	-176.56	0.09	-176.19	-175.83	0.1879	0.1882	0.1886	0.61049E-03	-0.30253E-04
32	387.5	-175.47	0.09	-175.11	-174.76	0.1890	0.1893	0.1897	0.27921E-03	-0.21238E-04
33	400.0	-174.42	0.08	-174.07	-173.73	0.1900	0.1904	0.1907	0.91236E-04	-0.93424E-05
34	412.5	-173.40	0.08	-173.07	-172.74	0.1911	0.1914	0.1918	0.21250E-04	-0.27309E-05
35	425.0	-172.42	0.08	-172.09	-171.78	0.1921	0.1924	0.1928	0.35261E-05	-0.54654E-06
36	437.5	-171.47	0.07	-171.16	-170.85	0.1931	0.1934	0.1938	0.41595E-06	-0.76589E-07
37	450.0	-170.55	0.07	-170.25	-169.96	0.1941	0.1944	0.1947	0.34158E-07	-0.76565E-08
38	462.5	-169.66	0.07	-169.38	-169.09	0.1950	0.1953	0.1956	0.16980E-08	-0.54433E-09
39	475.0	-168.81	0.07	-168.53	-168.26	0.1960	0.1963	0.1966	-0.12463E-10	-0.23826E-10
40	487.5	-167.99	0.06	-167.72	-167.46	0.1968	0.1971	0.1974	-0.15285E-10	0.36556E-12
41	500.0	-167.20	0.06	-166.95	-166.70	0.1977	0.1980	0.1983	-0.24564E-11	0.24363E-12
42	512.5	-166.45	0.06	-166.20	-165.96	0.1986	0.1988	0.1991	-0.30500E-12	0.40012E-13
43	525.0	-165.73	0.06	-165.49	-165.27	0.1994	0.1996	0.1999	-0.34184E-13	0.51831E-14
44	537.5	-165.04	0.05	-164.82	-164.60	0.2001	0.2004	0.2006	-0.34891E-14	0.59174E-15
45	550.0	-164.39	0.05	-164.19	-163.98	0.2009	0.2011	0.2013	-0.32162E-15	0.65928E-16
46	562.5	-163.78	0.05	-163.59	-163.40	0.2016	0.2018	0.2020	-0.11546E-16	0.52860E-17
47	575.0	-163.22	0.04	-163.04	-162.87	0.2022	0.2024	0.2026	0.73813E-17	-0.19784E-18
48	587.5	-162.70	0.04	-162.54	-162.39	0.2028	0.2030	0.2032	0.24212E-17	-0.26419E-18
49	600.0	-162.25	0.03	-161.97	-161.74	0.2034	0.2037	0.2040	0.33075E-18	-0.56184E-19
50	625.0	-161.53	0.02	-161.37	-161.26	0.2042	0.2044	0.2045	0.73053E-20	-0.21785E-20
51	650.0	-161.20	0.00	-161.20	-161.28	0.2046	0.2046	0.2045	0.81656E-21	-0.24125E-21
52	675.0	-161.45	-0.03	-161.72	-162.12	0.2043	0.2040	0.2035	0.91890E-22	-0.19147E-22
53	700.0	-162.67	-0.08	-163.40	-164.36	0.2029	0.2020	0.2009	0.36862E-23	0.32096E-23
54	725.0	-165.59	-0.16	-167.18	-169.23	0.1995	0.1977	0.1955	-0.35105E-23	0.24750E-23
55	750.0	-171.75	-0.33	-175.15	-179.62	0.1928	0.1893	0.1849	-0.17720E-23	0.86315E-24
56	775.0	-184.83	-0.65	-193.05	-204.73	0.1800	0.1729	0.1638	-0.53118E-24	0.21452E-24
57	800.0	-216.77	-1.34	-254.63	-311.65	0.1557	0.1361	0.1177	-0.11549E-24	0.40823E-25
58	825.0	-336.50	1.00			0.1122			0.000 0.000	

INFILTRATION RATE................ 0.000

DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 57.192

MOISTURE INCREASE IN PROFILE......... 56.675

**********NORMAL TERMINATION AT TIME = 312.21956 DAYS AND STEP NUMBER = 759

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: A, B, C

```
****************************************************************************
*                                                                          *
*       ONE-DIMENSIONAL UNSATURATED TRANSPORT                              *
*                                                                          *
*    SUMAT43    data source: GLEAMS OUTPUT                                 *
*    NODE WIDTH= 12.5,      TMAX:  320   FOR  AVG.  YEAR                   *
*    DICAMBA,  AVERAGE RAINFALL,  CN: A & B & C                            *
*                                                                          *
****************************************************************************
```

```
INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   61
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0
```

```
GLEAMS-DCM-AV-A,B,C    ************************************************************************

ELAPSED TIME     DAYS      HOURS       MINUTES        DELT                         ISTEP    NIT   NITT
               320.1354  7683.2507   0.4610E+06   0.5000E+00                     735      1   1392
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-378.62	1.00	-374.53	-370.58	0.0634	0.0638	0.0642	0.21793E-07	0.00000E+00
2	12.5	-366.76	0.90	-363.05	-359.44	0.0646	0.0650	0.0654	0.20734E-07	0.61893E-09
3	25.0	-355.92	0.84	-352.47	-349.09	0.0658	0.0662	0.0666	0.23344E-07	-0.21740E-08
4	37.5	-345.78	0.79	-342.50	-339.27	0.0670	0.0674	0.0678	-0.62043E-07	-0.95855E-08
5	50.0	-336.09	0.76	-332.66	-328.85	0.0682	0.0834	0.1115	-0.14314E-06	-0.96997E-09
6	62.5	-324.90	0.95	-320.96	-317.03	0.1274	0.1285	0.1296	-0.80843E-07	0.12314E-07
7	75.0	-313.11	0.94	-309.21	-305.30	0.1307	0.1318	0.1330	0.20147E-06	0.43512E-07
8	87.5	-301.41	0.93	-297.51	-293.62	0.1342	0.1355	0.1368	0.15930E-05	0.23964E-06
9	100.0	-289.73	0.93	-285.84	-281.95	0.1381	0.1394	0.1408	0.87386E-05	0.10663E-05
10	112.5	-278.06	0.93	-274.17	-270.27	0.1423	0.1437	0.1453	0.35599E-04	0.35787E-05
11	125.0	-266.36	0.94	-262.46	-258.54	0.1469	0.1485	0.1502	0.11833E-03	0.10035E-04
12	137.5	-254.63	0.94	-250.70	-246.77	0.1519	0.1537	0.1556	0.32866E-03	0.22198E-04

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under Average Rainfall Year And CN: A, B, C (Continue)

13	150.0	-242.84	0.94	-238.88	-234.92	0.1575	0.1595	0.1616	0.73188E-03	0.33062E-04
14	162.5	-231.00	0.93	-226.98	-223.26	0.1637	0.1617	0.1560	0.12242E-02	0.26777E-04
15	175.0	-220.77	0.37	-218.13	-216.08	0.1532	0.1548	0.1561	0.14372E-02	0.10149E-06
16	200.0	-214.11	0.25	-213.10	-212.17	0.1574	0.1581	0.1587	0.65059E-03	-0.40048E-04
17	212.5	-211.27	0.22	-210.37	-209.51	0.1593	0.1599	0.1605	0.24359E-03	-0.22896E-04
18	225.0	-208.67	0.20	-207.84	-207.05	0.1611	0.1616	0.1622	0.60850E-04	-0.76198E-05
19	237.5	-206.27	0.18	-205.51	-204.78	0.1627	0.1633	0.1638	0.10466E-04	-0.15890E-05
20	250.0	-204.06	0.17	-203.37	-202.69	0.1643	0.1648	0.1653	0.13376E-05	-0.23863E-06
21	262.5	-202.03	0.16	-201.40	-200.78	0.1658	0.1663	0.1668	0.12119E-06	-0.26866E-07
22	275.0	-200.18	0.14	-199.60	-199.03	0.1672	0.1677	0.1681	0.90543E-08	-0.21185E-08
23	287.5	-198.49	0.13	-197.96	-197.46	0.1685	0.1689	0.1693	0.11418E-08	-0.26022E-09
24	300.0	-196.97	0.11	-196.50	-196.06	0.1697	0.1701	0.1704	0.11427E-09	-0.32433E-10
25	312.5	-195.63	0.10	-195.23	-194.84	0.1708	0.1711	0.1714	0.52325E-11	-0.24985E-11
26	325.0	-194.48	0.08	-194.15	-193.83	0.1717	0.1720	0.1722	0.95293E-14	-0.19068E-12
27	337.5	-193.54	0.07	-193.28	-193.05	0.1725	0.1727	0.1729	-0.48583E-14	-0.16484E-13
28	350.0	-192.84	0.05	-192.66	-192.52	0.1731	0.1732	0.1733	-0.28763E-14	0.15712E-16
29	362.5	-192.41	0.02	-192.34	-192.30	0.1734	0.1735	0.1735	-0.45743E-15	-0.16844E-15
30	375.0	-192.31	-0.01	-192.36	-192.46	0.1735	0.1735	0.1734	0.13344E-15	-0.98420E-16
31	387.5	-192.61	-0.04	-192.82	-193.08	0.1732	0.1731	0.1729	0.19953E-16	0.14157E-17
32	400.0	-193.41	-0.09	-193.82	-194.30	0.1726	0.1723	0.1719	-0.62896E-17	0.43008E-17
33	412.5	-194.86	-0.15	-195.52	-196.28	0.1714	0.1709	0.1703	-0.11380E-17	0.31688E-20
34	425.0	-197.16	-0.22	-198.16	-199.30	0.1696	0.1688	0.1679	0.24716E-18	-0.25137E-18
35	437.5	-200.60	-0.33	-202.08	-203.75	0.1669	0.1658	0.1646	0.88683E-19	-0.37267E-19
36	450.0	-205.64	-0.48	-207.79	-210.22	0.1632	0.1617	0.1600	0.24187E-20	0.63677E-20
37	462.5	-212.99	-0.71	-216.12	-219.69	0.1581	0.1561	0.1539	-0.38121E-20	0.34749E-20
38	475.0	-223.76	-1.04	-228.41	-233.74	0.1514	0.1488	0.1459	-0.10759E-20	0.66105E-21
39	487.5	-239.82	-1.56	-246.80	-254.74	0.1428	0.1395	0.1360	-0.13968E-21	0.42003E-22
40	500.0	-263.71	-2.28	-273.72	-284.50	0.1324	0.1287	0.1252	0.28374E-23	-0.16850E-22
41	512.5	-295.61	-2.67	-306.29	-315.65	0.1219	0.1190	0.1167	0.71496E-23	-0.86633E-23
42	525.0	-323.07	-1.50	-328.28	-331.71	0.1150	0.1139	0.1132	0.27557E-23	-0.29297E-23
43	537.5	-333.78	-0.37	-334.99	-335.68	0.1127	0.1125	0.1124	0.88106E-24	-0.89883E-24
44	550.0	-336.04	-0.07	-336.26	-336.37	0.1123	0.1122	0.1122	0.26592E-24	-0.26400E-24
45	562.5	-336.43	-0.01	-336.46	-336.48	0.1122	0.1122	0.1122	0.77329E-25	-0.74965E-25
46	575.0	-336.49	0.00	-336.49	-336.50	0.1122	0.1122	0.1122	0.21824E-25	-0.20585E-25
47	587.5	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	0.61902E-26	-0.52808E-26
48	600.0	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	0.20493E-26	-0.68902E-27
49	625.0	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	0.30749E-27	-0.14499E-27
50	650.0	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	0.82190E-28	-0.39750E-28
51	675.0	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	0.22836E-28	-0.11036E-28
52	700.0	-336.50	0.00	-336.50	-336.51	0.1122	0.1122	0.1122	0.63397E-29	-0.30573E-29
53	725.0	-336.51	0.00	-336.51	-336.52	0.1122	0.1122	0.1122	0.17549E-29	-0.84438E-30
54	750.0	-336.53	0.00	-336.54	-336.56	0.1122	0.1122	0.1122	0.48428E-30	-0.23244E-30
55	775.0	-336.58	0.00	-336.61	-336.66	0.1122	0.1122	0.1122	0.13320E-30	-0.63767E-31
56	800.0	-336.72	-0.01	-336.79	-336.89	0.1122	0.1121	0.1121	0.36506E-31	-0.17430E-31
57	825.0	-337.02	-0.02	-337.18	-337.39	0.1121	0.1121	0.1120	0.99684E-32	-0.47455E-32
58	850.0	-337.66	-0.04	-337.99	-338.40	0.1120	0.1119	0.1118	0.27121E-32	-0.12863E-32

INFILTRATION RATE................ 0.000 MOISTURE ADDED TO PROFILE............ 23.974
DRAINAGE RATE.................... 0.000 MOISTURE INCREASE IN PROFILE......... 23.690

**********NORMAL TERMINATION AT TIME = 320.13545 DAYS AND STEP NUMBER = 735

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: A, B, C

```
###############################################################################
#                                                                             #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                #
#                                                                             #
#     SUMAT53    data source: GLEAMS OUTPUT                                   #
#     NODE WIDTH= 12.5,      TMAX:  264   FOR LOW  YEAR                       #
#     DICAMBA,  LOW RAINFALL,  CN: A & B & C                                  #
#                                                                             #
###############################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   43
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 264.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 132.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........     1
KDRAIN........................(DRAINAGE CODE)..........     2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........     0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......     0
KOD3...............(WRITE MATERIAL PROPERTIES)..........     4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......     0

GLEAMS-DCM-LO-A,B,C  ##########################################################################

 ELAPSED TIME     DAYS      HOURS       MINUTES       DELT                        ISTEP    NIT   NITT
              264.0716 6337.7192    0.3803E+06    0.5000E+00                       606      1    971
```

NODE	DEPTH	PRESSURE HEAD FUNCTN	GRAD	F(1/3)	F(2/3)	MOISTURE CONTENT FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-416.10	1.00	-412.02	-408.10	0.0603	0.0606	0.0609	0.49566E-03	0.00000E+00
2	12.5	-404.33	0.89	-400.69	-397.15	0.0612	0.0615	0.0618	0.70813E-03	0.26726E-04
3	25.0	-393.72	0.81	-390.38	-387.10	0.0621	0.0624	0.0626	0.95872E-03	0.11182E-04
4	37.5	-383.89	0.76	-380.73	-377.62	0.0629	0.0632	0.0635	0.10642E-02	0.11535E-04
5	50.0	-374.53	0.74	-371.14	-367.32	0.0638	0.0778	0.1038	0.13996E-02	0.48121E-04
6	62.5	-363.34	0.95	-359.39	-355.43	0.1184	0.1192	0.1200	0.18908E-02	0.24318E-04
7	75.0	-351.48	0.95	-347.54	-343.61	0.1209	0.1218	0.1227	0.19496E-02	-0.17945E-04
8	87.5	-339.68	0.94	-335.75	-331.83	0.1237	0.1246	0.1256	0.15009E-02	-0.49274E-04
9	100.0	-327.90	0.94	-323.98	-320.05	0.1266	0.1277	0.1287	0.86118E-03	-0.48582E-04
10	112.5	-316.13	0.94	-312.20	-308.27	0.1298	0.1310	0.1321	0.36447E-03	-0.29688E-04

GLEAMS+FEM Output Of Pesticide Concentration For Dicamba Under Low Rainfall Year And CN: A, B, C (Continue)

11	125.0	-304.34	0.94	-300.40	-296.46	0.1333	0.1345	0.1358	0.11080E-03	-0.12043E-04
12	137.5	-292.51	0.95	-288.56	-284.60	0.1371	0.1385	0.1399	0.23468E-04	-0.32363E-05
13	150.0	-280.65	0.95	-276.68	-272.69	0.1413	0.1428	0.1443	0.33804E-05	-0.56671E-06
14	162.5	-268.76	0.93	-264.72	-260.98	0.1459	0.1435	0.1375	0.32647E-06	-0.61919E-07
15	175.0	-258.49	0.37	-257.39	-256.85	0.1345	0.1349	0.1351	0.20259E-07	-0.42365E-08
16	187.5	-256.34	0.16	-255.76	-255.33	0.1353	0.1356	0.1358	0.81073E-09	-0.21899E-09
17	200.0	-254.95	0.09	-254.61	-254.35	0.1359	0.1361	0.1362	0.67342E-11	-0.85770E-11
18	212.5	-254.14	0.04	-253.99	-253.91	0.1363	0.1363	0.1364	-0.38487E-11	-0.95429E-13
19	225.0	-253.89	0.00	-253.93	-254.03	0.1364	0.1364	0.1363	-0.84667E-12	0.70564E-13
20	237.5	-254.20	-0.05	-254.44	-254.75	0.1362	0.1361	0.1360	-0.13812E-12	0.18623E-13
21	250.0	-255.13	-0.10	-255.59	-256.13	0.1358	0.1357	0.1354	-0.19627E-13	0.33396E-14
22	262.5	-256.75	-0.16	-257.46	-258.26	0.1352	0.1349	0.1346	-0.27702E-14	0.55580E-15
23	275.0	-259.15	-0.23	-260.15	-261.25	0.1342	0.1338	0.1334	-0.38478E-15	0.90669E-16
24	287.5	-262.47	-0.31	-263.80	-265.26	0.1329	0.1324	0.1318	-0.50759E-16	0.14132E-16
25	300.0	-266.84	-0.40	-268.57	-270.44	0.1312	0.1306	0.1299	-0.65635E-17	0.21684E-17
26	312.5	-272.45	-0.50	-274.63	-276.95	0.1292	0.1284	0.1276	-0.86599E-18	0.33550E-18
27	325.0	-279.44	-0.62	-282.09	-284.89	0.1268	0.1259	0.1250	-0.11892E-18	0.51950E-19
28	337.5	-287.84	-0.72	-290.93	-294.13	0.1241	0.1232	0.1223	-0.16804E-19	0.77621E-20
29	350.0	-297.43	-0.80	-300.80	-304.19	0.1214	0.1204	0.1195	-0.23450E-20	0.10494E-20
30	362.5	-307.57	-0.81	-310.88	-314.08	0.1187	0.1178	0.1171	-0.30097E-21	0.11122E-21
31	375.0	-317.12	-0.71	-319.96	-322.57	0.1163	0.1157	0.1151	-0.30548E-22	0.36577E-23
32	387.5	-324.91	-0.53	-326.98	-328.77	0.1146	0.1142	0.1138	-0.92858E-24	-0.24311E-23
33	400.0	-330.31	-0.34	-331.60	-332.67	0.1135	0.1132	0.1130	0.63745E-24	-0.90297E-24
34	412.5	-333.54	-0.19	-334.26	-334.83	0.1128	0.1126	0.1125	0.22054E-24	-0.18789E-24
35	425.0	-335.29	-0.10	-335.65	-335.95	0.1124	0.1124	0.1123	0.38601E-25	-0.14562E-25
36	437.5	-336.19	-0.05	-336.38	-336.55	0.1123	0.1122	0.1122	-0.89921E-27	0.88079E-26
37	450.0	-336.69	-0.03	-336.82	-336.94	0.1122	0.1121	0.1121	-0.40186E-26	0.59590E-26
38	462.5	-337.05	-0.03	-337.17	-337.29	0.1121	0.1121	0.1120	-0.21021E-26	0.24550E-26
39	475.0	-337.42	-0.03	-337.55	-337.70	0.1120	0.1120	0.1120	-0.79566E-27	0.82369E-27
40	487.5	-337.86	-0.04	-338.03	-338.22	0.1119	0.1119	0.1119	-0.25418E-27	0.24098E-27
41	500.0	-338.43	-0.05	-338.67	-338.92	0.1118	0.1118	0.1117	-0.71643E-28	0.62483E-28
42	512.5	-339.20	-0.07	-339.55	-339.11	0.1117	0.1116	0.1117	-0.18456E-28	0.13795E-28
43	525.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 8.915
MOISTURE INCREASE IN PROFILE......... 8.545

**********NORMAL TERMINATION AT TIME = 264.07163 DAYS AND STEP NUMBER = 606

GLEAMS+FEM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: A, B, C

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################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#    SUMAT53    data source: GLEAMS OUTPUT                                     #
#    NODE WIDTH= 12.5,      TMAX:  312   FOR HIGH YEAR                         #
#    2,4-D        HIGH RAINFALL      CN: A, B, C                               #
#                                                                              #
################################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............    61
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)..........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 312.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 156.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)...........   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........     1
KDRAIN........................(DRAINAGE CODE)..........     2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........     0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......     0
KOD3...............(WRITE MATERIAL PROPERTIES)..........     4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......     0

GLEAMS-24D-HI-A,B,C    ########################################################################

ELAPSED TIME     DAYS      HOURS      MINUTES       DELT                          ISTEP   NIT   NITT
              312.1135 7490.7235   0.4494E+06   0.5000E+00                          741     1   1840
```

NODE	DEPTH	PRESSURE HEAD FUNCIN	GRAD	F(1/3)	F(2/3)	MOISTURE CONTENT FUNCIN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-358.08	1.00	-354.02	-350.15	0.0655	0.0660	0.0664	0.19164E-18	0.00000E+00
2	12.5	-346.46	0.87	-342.92	-339.52	0.0669	0.0673	0.0677	-0.23399E-18	0.92059E-20
3	25.0	-336.23	0.78	-333.04	-329.94	0.0682	0.0686	0.0690	0.92617E-19	-0.36844E-18
4	37.5	-326.92	0.72	-323.95	-321.03	0.0695	0.0699	0.0704	0.12314E-16	0.27434E-17
5	50.0	-318.18	0.68	-315.01	-311.35	0.0708	0.0866	0.1158	0.15129E-16	-0.23331E-17
6	62.5	-307.49	0.92	-303.64	-299.80	0.1324	0.1335	0.1347	0.20652E-18	-0.10637E-18
7	75.0	-295.96	0.92	-292.14	-288.32	0.1360	0.1372	0.1386	0.12490E-18	-0.31825E-19
8	87.5	-284.51	0.92	-280.69	-276.88	0.1399	0.1413	0.1427	-0.23920E-19	0.11016E-19
9	100.0	-273.07	0.92	-269.25	-265.43	0.1442	0.1457	0.1472	-0.10062E-20	-0.18367E-20
10	112.5	-261.61	0.92	-257.78	-253.94	0.1488	0.1505	0.1522	0.15106E-20	-0.27511E-21
11	125.0	-250.10	0.92	-246.25	-242.39	0.1540	0.1558	0.1577	-0.27815E-21	0.18022E-21
12	137.5	-238.52	0.93	-234.64	-230.75	0.1597	0.1618	0.1639	-0.30249E-22	-0.17460E-22
13	150.0	-226.86	0.93	-222.95	-219.01	0.1661	0.1683	0.1707	0.16379E-22	-0.79133E-23

GLEAMS+FEM Output Of Pesticide Concentration For 2,4-D Under High Rainfall Year And CN: A, B, C (Continue)

14	162.5	-215.13	0.92	-211.14	-207.47	0.1731	0.1715	0.1661	-0.28947E-24	0.16028E-23
15	175.0	-205.09	0.34	-202.71	-200.89	0.1636	0.1653	0.1667	-0.83168E-24	0.28435E-24
16	200.0	-199.15	0.22	-198.27	-197.46	0.1680	0.1687	0.1693	-0.59539E-25	0.82752E-25
17	212.5	-196.67	0.19	-195.90	-195.15	0.1699	0.1706	0.1712	-0.35670E-25	-0.17697E-25
18	225.0	-194.43	0.17	-193.72	-193.04	0.1718	0.1723	0.1729	0.16174E-25	-0.12417E-25
19	237.5	-192.37	0.16	-191.72	-191.09	0.1734	0.1740	0.1745	0.36071E-26	-0.13920E-26
20	250.0	-190.47	0.15	-189.87	-189.28	0.1750	0.1756	0.1761	0.19527E-27	0.21431E-27
21	262.5	-188.71	0.14	-188.15	-187.60	0.1766	0.1770	0.1775	-0.13161E-27	0.14956E-27
22	275.0	-187.06	0.13	-186.53	-186.02	0.1780	0.1785	0.1789	-0.54381E-28	0.40138E-28
23	287.5	-185.51	0.12	-185.01	-184.52	0.1794	0.1798	0.1803	-0.12298E-28	0.38439E-29
24	300.0	-184.05	0.11	-183.57	-183.11	0.1807	0.1812	0.1816	-0.39045E-31	-0.22323E-29
25	312.5	-182.65	0.11	-182.21	-181.76	0.1820	0.1824	0.1828	0.12330E-29	-0.11814E-29
26	325.0	-181.33	0.10	-180.90	-180.48	0.1832	0.1837	0.1841	0.43282E-30	-0.18812E-30
27	337.5	-180.06	0.10	-179.65	-179.24	0.1845	0.1848	0.1852	0.24625E-31	0.46698E-31
28	350.0	-178.84	0.10	-178.45	-178.06	0.1856	0.1860	0.1864	-0.30914E-31	0.30400E-31
29	362.5	-177.67	0.09	-177.29	-176.91	0.1868	0.1872	0.1875	-0.11308E-31	0.48735E-32
30	375.0	-176.54	0.09	-176.17	-175.81	0.1879	0.1883	0.1886	-0.67237E-33	-0.12463E-32
31	387.5	-175.45	0.09	-175.10	-174.74	0.1890	0.1893	0.1897	0.78654E-33	-0.84014E-33
32	400.0	-174.40	0.08	-174.05	-173.72	0.1901	0.1904	0.1908	0.31307E-33	-0.17064E-33
33	412.5	-173.38	0.08	-173.05	-172.72	0.1911	0.1914	0.1918	0.36560E-34	0.13114E-34
34	425.0	-172.40	0.08	-172.08	-171.76	0.1921	0.1925	0.1928	-0.13101E-34	0.18378E-34
35	437.5	-171.45	0.07	-171.14	-170.84	0.1931	0.1934	0.1938	-0.73207E-35	0.53552E-35
36	450.0	-170.53	0.07	-170.24	-169.94	0.1941	0.1944	0.1947	-0.15293E-35	0.45176E-36
37	462.5	-169.65	0.07	-169.36	-169.08	0.1950	0.1954	0.1957	0.24211E-37	-0.24930E-36
38	475.0	-168.80	0.07	-168.52	-168.25	0.1960	0.1963	0.1966	0.12327E-36	-0.12166E-36
39	487.5	-167.98	0.06	-167.72	-167.45	0.1969	0.1972	0.1974	0.41438E-37	-0.24719E-37
40	500.0	-167.19	0.06	-166.94	-166.69	0.1977	0.1980	0.1983	0.56852E-38	-0.45811E-41
41	512.5	-166.44	0.06	-166.20	-165.96	0.1986	0.1988	0.1991	-0.92408E-39	0.17669E-38
42	525.0	-165.72	0.06	-165.49	-165.26	0.1994	0.1996	0.1999	-0.73059E-39	0.64985E-39
43	537.5	-165.04	0.05	-164.82	-164.61	0.2001	0.2004	0.2006	-0.20373E-39	0.12027E-39
44	550.0	-164.40	0.05	-164.19	-163.99	0.2009	0.2011	0.2013	-0.26381E-40	0.14948E-41
45	562.5	-163.79	0.05	-163.60	-163.41	0.2016	0.2018	0.2020	0.35062E-41	-0.73524E-41
46	575.0	-163.23	0.04	-163.06	-162.89	0.2022	0.2024	0.2026	0.30258E-41	-0.29025E-41
47	587.5	-162.73	0.04	-162.57	-162.42	0.2028	0.2030	0.2032	0.94197E-42	-0.63487E-42
48	600.0	-162.27	0.03	-162.01	-161.78	0.2033	0.2036	0.2039	0.16181E-42	-0.42678E-43
49	625.0	-161.59	0.02	-161.43	-161.33	0.2041	0.2043	0.2044	0.15729E-43	-0.38488E-44
50	650.0	-161.29	0.00	-161.31	-161.41	0.2045	0.2045	0.2043	0.13581E-44	0.31643E-45
51	675.0	-161.61	-0.03	-161.91	-162.34	0.2041	0.2038	0.2033	-0.42467E-45	0.43494E-45
52	700.0	-162.93	-0.08	-163.72	-164.74	0.2026	0.2017	0.2005	-0.31248E-45	0.20027E-45
53	725.0	-166.06	-0.18	-167.74	-169.89	0.1990	0.1971	0.1948	-0.13163E-45	0.70586E-46
54	750.0	-172.65	-0.37	-176.19	-180.80	0.1919	0.1882	0.1837	-0.43664E-46	0.21055E-46
55	775.0	-186.83	-0.82	-194.99	-206.38	0.1782	0.1713	0.1627	-0.12210E-46	0.56524E-47
56	800.0	-221.83	-2.13	-246.70	-280.36	0.1526	0.1395	0.1265	-0.31366E-47	0.14946E-47
57	825.0	-314.74	-3.85	-334.12	-337.04	0.1169	0.1127	0.1121	-0.84634E-48	0.41466E-48
58	850.0	-336.83	-0.32	-338.29	-338.41	0.1121	0.1119	0.1118	-0.23925E-48	0.11721E-48
59	875.0	-338.76	-0.12	-339.59	-340.31	0.1118	0.1116	0.1115	-0.68092E-49	0.32965E-49

INFILTRATION RATE................ 0.000   MOISTURE ADDED TO PROFILE............ 56.790
DRAINAGE RATE.................... 0.000   MOISTURE INCREASE IN PROFILE......... 56.573

**********NORMAL TERMINATION AT TIME =   312.11348 DAYS AND STEP NUMBER = 741

GLEAMS+FEM Output Of Pesticide Concentration For 2,4-D Under Average Rainfall Year And CN: A, B, C

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################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#     SUMAT43    data source: GLEAMS OUTPUT                                    #
#     NODE WIDTH= 12.5,      TMAX:  320   FOR  AVG.  YEAR                      #
#     2,4-D       AVERAGE RAINFALL      CN: A, B, C                            #
#                                                                              #
################################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   41
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........   1
KDRAIN........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3...............(WRITE MATERIAL PROPERTIES)..........   4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0

GLEAMS-24D-AV-A,B,C    ################################################################

ELAPSED TIME    DAYS      HOURS       MINUTES      DELT                        ISTEP   NIT   NITT
             320.0549 7681.3176   0.4609E+06   0.5000E+00                      732     1   1418

                ---------PRESSURE HEAD--------   ---MOISTURE CONTENT---   --------CONCENTRATION---------
NODE   DEPTH    FUNCTN   GRAD  F(1/3)  F(2/3)    FUNCTN  F(1/3)  F(2/3)   CONCENTRATION     GRADIENT
  1     0.0    -378.67   1.00 -374.58 -370.63    0.0634  0.0638  0.0642   -0.25226E-19    0.00000E+00
  2    12.5    -366.81   0.90 -363.10 -359.49    0.0646  0.0650  0.0654    0.69712E-18    0.20501E-18
  3    25.0    -355.97   0.84 -352.52 -349.14    0.0658  0.0662  0.0665    0.14927E-17   -0.21086E-18
  4    37.5    -345.82   0.79 -342.55 -339.32    0.0670  0.0674  0.0678   -0.24760E-19    0.18602E-19
  5    50.0    -336.13   0.76 -332.70 -328.89    0.0682  0.0834  0.1115   -0.74112E-20   -0.30522E-20
  6    62.5    -324.94   0.95 -321.01 -317.08    0.1274  0.1285  0.1296    0.41183E-20   -0.16592E-20
  7    75.0    -313.16   0.94 -309.25 -305.35    0.1307  0.1318  0.1330   -0.37664E-21    0.47350E-21
  8    87.5    -301.45   0.93 -297.55 -293.66    0.1342  0.1355  0.1367   -0.17041E-21   -0.30654E-22
  9   100.0    -289.77   0.93 -285.88 -281.99    0.1381  0.1394  0.1408    0.54734E-22   -0.32651E-22
 10   112.5    -278.10   0.93 -274.21 -270.31    0.1422  0.1437  0.1453    0.63127E-23    0.10455E-23

  INFILTRATION RATE................   0.000        MOISTURE ADDED TO PROFILE............  23.922
  DRAINAGE RATE....................   0.000        MOISTURE INCREASE IN PROFILE.........  23.443

  ##########NORMAL TERMINATION AT TIME =    320.05490 DAYS AND STEP NUMBER =  732
```

GLEAMS+FEM Output Of Pesticide Concentration For 2,4-D Under Low Rainfall Year And CN: A, B, C

```
*****************************************************************************
*                                                                           *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                              *
*                                                                           *
*     SUMAT53    data source: GLEAMS OUTPUT                                 *
*     NODE WIDTH= 12.5,     TMAX:  264   FOR LOW  YEAR                      *
*     2,4-D      LOW RAINFALL      CN: A, B, C                              *
*****************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES.......................(NN)...............   43
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 264.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 132.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

GLEAMS-24D-LO-A,B,C  ************************************************************************

ELAPSED TIME    DAYS      HOURS      MINUTES       DELT                          ISTEP   NIT   NITT
              263.7790 6330.6966   0.3798E+06   0.5000E+00                        602     1    955

                  ---------PRESSURE HEAD--------     ---MOISTURE CONTENT---    --------CONCENTRATION---------
NODE   DEPTH    FUNCTN    GRAD  F(1/3)  F(2/3)    FUNCTN  F(1/3)  F(2/3)    CONCENTRATION     GRADIENT
  1     0.0    -415.69    1.00 -411.61 -407.69    0.0604  0.0607  0.0610     0.73540E-19     0.00000E+00
  2    12.5    -403.92    0.89 -400.28 -396.75    0.0613  0.0615  0.0618     0.13530E-18    -0.23341E-19
  3    25.0    -393.31    0.81 -389.97 -386.69    0.0621  0.0624  0.0627    -0.64735E-20     0.45146E-20
  4    37.5    -383.48    0.76 -380.32 -377.20    0.0630  0.0633  0.0636    -0.12982E-20     0.15832E-21
  5    50.0    -374.11    0.74 -370.73 -366.90    0.0639  0.0778  0.1039     0.21104E-21    -0.26404E-21
  6    62.5    -362.93    0.95 -358.97 -355.02    0.1184  0.1193  0.1201     0.10363E-21    -0.30750E-22
  7    75.0    -351.07    0.95 -347.13 -343.20    0.1210  0.1219  0.1228    -0.62813E-23     0.45106E-23
  8    87.5    -339.27    0.94 -335.34 -331.42    0.1238  0.1247  0.1257    -0.10144E-23     0.73775E-25
  9   100.0    -327.49    0.94 -323.57 -319.64    0.1267  0.1278  0.1288     0.13578E-24    -0.23123E-24
 10   112.5    -315.72    0.94 -311.79 -307.86    0.1299  0.1311  0.1322     0.90524E-25    -0.57436E-25
 11   125.0    -303.93    0.94 -299.99 -296.05    0.1334  0.1347  0.1359     0.12853E-25    -0.43028E-27

 INFILTRATION RATE................    0.000          MOISTURE ADDED TO PROFILE............   8.926
 DRAINAGE RATE....................    0.000          MOISTURE INCREASE IN PROFILE.........   8.629

 **********NORMAL TERMINATION AT TIME =    264.27902 DAYS AND STEP NUMBER =  603
```

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: A

```
################################################################################
#                                                                              #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                                 #
#                                                                              #
#    SUMAT43    data source: GLEAMS OUTPUT                                     #
#    NODE WIDTH= 12.5,      TMAX:  320   FOR  AVG.  YEAR                       #
#    ATRAZINE,   HIGH RAINFALL,  CN: A                                         #
#                                                                              #
################################################################################

INPUT PARAMETERS
================
NUMBER OF NODES.....................(NN)...............   61
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP..................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT..............(EPSI)...........  0.50000
ITERATION TOLERANCE................(TOL1)...........  0.50000
ITERATION TOLERANCE................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........   1
KDRAIN........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3..............(WRITE MATERIAL PROPERTIES)..........   4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0

GLEAMS-ATRZINE-HI-A  ########################################################################
```

ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	320.1135	7682.7235	0.4610E+06	0.5000E+00	757	1	1856

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-363.54	1.00	-359.47	-355.57	0.0649	0.0654	0.0658	0.44196E-04	0.00000E+00
2	12.5	-351.84	0.88	-348.24	-344.77	0.0662	0.0667	0.0671	0.43940E-03	0.51971E-04
3	25.0	-341.40	0.80	-338.13	-334.93	0.0675	0.0679	0.0684	0.69314E-03	-0.23123E-04
4	37.5	-331.81	0.74	-328.74	-325.71	0.0688	0.0692	0.0697	0.99527E-03	0.95450E-04
5	50.0	-322.75	0.70	-319.49	-315.78	0.0701	0.0857	0.1147	0.47889E-02	0.58116E-03
6	62.5	-311.89	0.93	-308.01	-304.14	0.1310	0.1322	0.1334	0.88731E-02	-0.16564E-04
7	75.0	-300.28	0.92	-296.43	-292.58	0.1346	0.1358	0.1371	0.66341E-02	-0.19091E-03
8	87.5	-288.74	0.92	-284.90	-281.07	0.1384	0.1398	0.1411	0.66446E-02	0.11305E-03
9	100.0	-277.23	0.92	-273.39	-269.55	0.1426	0.1440	0.1456	0.59843E-02	-0.24353E-03
10	112.5	-265.71	0.92	-261.86	-258.00	0.1471	0.1487	0.1504	0.24515E-02	-0.24826E-03
11	125.0	-254.14	0.93	-250.27	-246.39	0.1521	0.1539	0.1558	0.49523E-03	-0.75517E-04
12	137.5	-242.51	0.93	-238.62	-234.71	0.1577	0.1597	0.1617	0.46091E-04	-0.10147E-04
13	150.0	-230.81	0.93	-226.89	-222.94	0.1638	0.1660	0.1683	0.20112E-05	-0.61758E-06

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: A (Continue)

14	162.5	-219.05	0.92	-215.05	-211.37	0.1707	0.1689	0.1635	-0.14561E-07	-0.23278E-07
15	175.0	-208.96	0.35	-206.49	-204.59	0.1609	0.1626	0.1639	0.12378E-07	-0.45974E-08
16	200.0	-202.78	0.23	-201.86	-201.01	0.1653	0.1660	0.1666	0.10203E-08	-0.11114E-08
17	212.5	-200.18	0.20	-199.37	-198.58	0.1672	0.1678	0.1685	0.37780E-09	-0.41375E-10
18	225.0	-197.82	0.18	-197.08	-196.35	0.1690	0.1696	0.1702	-0.11097E-09	0.77467E-10
19	237.5	-195.65	0.17	-194.96	-194.29	0.1708	0.1713	0.1719	-0.69256E-11	-0.79264E-11
20	250.0	-193.64	0.15	-193.00	-192.38	0.1724	0.1729	0.1734	0.35930E-11	-0.15596E-11
21	262.5	-191.77	0.14	-191.18	-190.60	0.1739	0.1744	0.1749	0.66266E-12	0.13591E-12
22	275.0	-190.03	0.13	-189.47	-188.93	0.1754	0.1759	0.1764	-0.22304E-12	0.12291E-12
23	287.5	-188.40	0.13	-187.87	-187.36	0.1768	0.1773	0.1777	-0.37087E-13	0.48586E-14
24	300.0	-186.86	0.12	-186.36	-185.88	0.1782	0.1786	0.1791	0.40852E-14	-0.93990E-14
25	312.5	-185.40	0.11	-184.93	-184.47	0.1795	0.1799	0.1803	0.46947E-14	-0.24749E-14
26	325.0	-184.02	0.11	-183.57	-183.14	0.1807	0.1812	0.1816	0.46912E-15	0.47923E-15
27	337.5	-182.70	0.10	-182.28	-181.86	0.1820	0.1824	0.1827	-0.41869E-15	0.29100E-15
28	350.0	-181.45	0.10	-181.04	-180.64	0.1831	0.1835	0.1839	-0.84563E-16	-0.17801E-16
29	362.5	-180.24	0.09	-179.85	-179.47	0.1843	0.1847	0.1850	0.33123E-16	-0.28943E-16
30	375.0	-179.08	0.09	-178.71	-178.34	0.1854	0.1858	0.1861	0.10869E-16	-0.79274E-18
31	387.5	-177.97	0.09	-177.61	-177.25	0.1865	0.1868	0.1872	-0.20628E-17	0.27788E-17
32	400.0	-176.90	0.08	-176.55	-176.20	0.1875	0.1879	0.1882	-0.12657E-17	0.46811E-18
33	412.5	-175.86	0.08	-175.52	-175.19	0.1886	0.1889	0.1893	-0.12843E-20	-0.17321E-18
34	425.0	-174.86	0.08	-174.53	-174.21	0.1896	0.1899	0.1903	0.10404E-18	-0.67366E-19
35	437.5	-173.89	0.08	-173.57	-173.26	0.1906	0.1909	0.1912	0.17760E-19	0.21205E-20
36	450.0	-172.95	0.07	-172.65	-172.35	0.1915	0.1919	0.1922	-0.50500E-20	0.53555E-20
37	462.5	-172.05	0.07	-171.75	-171.46	0.1925	0.1928	0.1931	-0.21272E-20	0.82746E-21
38	475.0	-171.17	0.07	-170.89	-170.61	0.1934	0.1937	0.1940	-0.20367E-22	-0.22855E-21
39	487.5	-170.33	0.07	-170.05	-169.78	0.1943	0.1946	0.1949	0.13737E-21	-0.10394E-21
40	500.0	-169.51	0.06	-169.25	-168.99	0.1952	0.1955	0.1958	0.30026E-22	-0.62012E-23
41	512.5	-168.73	0.06	-168.48	-168.22	0.1960	0.1963	0.1966	-0.25289E-23	0.54388E-23
42	525.0	-167.98	0.06	-167.73	-167.49	0.1969	0.1971	0.1974	-0.25154E-23	0.16392E-23
43	537.5	-167.25	0.06	-167.02	-166.79	0.1977	0.1979	0.1982	-0.40533E-24	0.60224E-25
44	550.0	-166.56	0.05	-166.34	-166.12	0.1984	0.1987	0.1989	0.50406E-25	-0.77113E-25
45	562.5	-165.91	0.05	-165.70	-165.49	0.1992	0.1994	0.1996	0.32084E-25	-0.21123E-25
46	575.0	-165.29	0.05	-165.09	-164.90	0.1999	0.2001	0.2003	0.48542E-26	-0.12319E-26
47	587.5	-164.71	0.04	-164.53	-164.35	0.2005	0.2007	0.2009	-0.36671E-27	0.59670E-27
48	600.0	-164.18	0.04	-163.86	-163.56	0.2011	0.2015	0.2018	-0.30404E-27	0.94528E-28
49	625.0	-163.29	0.03	-163.05	-162.85	0.2022	0.2024	0.2027	-0.40208E-28	0.16134E-28
50	650.0	-162.69	0.02	-162.57	-162.51	0.2029	0.2030	0.2030	-0.88933E-29	0.31571E-29
51	675.0	-162.52	-0.01	-162.61	-162.78	0.2030	0.2029	0.2027	-0.16114E-29	0.38348E-30
52	700.0	-163.06	-0.04	-163.47	-164.04	0.2024	0.2019	0.2013	-0.99762E-31	-0.33105E-31
53	725.0	-164.79	-0.10	-165.78	-167.05	0.2004	0.1993	0.1979	0.45835E-31	-0.32879E-31
54	750.0	-168.69	-0.22	-170.76	-173.43	0.1961	0.1938	0.1911	0.23974E-31	-0.11580E-31
55	775.0	-176.87	-0.47	-181.30	-187.15	0.1876	0.1833	0.1779	0.67440E-32	-0.29443E-32
56	800.0	-194.99	-1.08	-205.72	-221.14	0.1713	0.1631	0.1530	0.15922E-32	-0.72726E-33
57	825.0	-243.14	-3.11	-276.19	-311.84	0.1412	0.1279	0.1176	0.39908E-33	-0.19057E-33

INFILTRATION RATE................ 0.000 MOISTURE ADDED TO PROFILE............ 56.790
DRAINAGE RATE.................... 0.000 MOISTURE INCREASE IN PROFILE......... 56.558

***********NORMAL TERMINATION AT TIME = 320.11348 DAYS AND STEP NUMBER = 757

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: B

```
*****************************************************************************
*                                                                           *
*         ONE-DIMENSIONAL UNSATURATED TRANSPORT                             *
*                                                                           *
*     SUMAT43    data source: GLEAMS OUTPUT                                 *
*     NODE WIDTH= 12.5,      TMAX: 320    FOR  AVG.  YEAR                   *
*     ATRAZINE,  HIGH RAINFALL,  CN: B                                      *
*                                                                           *
*****************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   61
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

GLEAMS-ATZ-HI-B    *************************************************************

ELAPSED TIME    DAYS     HOURS      MINUTES      DELT                     ISTEP   NIT  NITT
             319.8146 7675.5512   0.4605E+06  0.5000E+00                    755     1  1855
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-363.36	1.00	-359.29	-355.40	0.0649	0.0654	0.0658	0.13860E-04	0.00000E+00
2	12.5	-351.67	0.88	-348.07	-344.60	0.0663	0.0667	0.0671	0.56168E-03	0.17955E-04
3	25.0	-341.23	0.80	-337.96	-334.77	0.0675	0.0680	0.0684	0.23547E-03	0.10148E-03
4	37.5	-331.65	0.74	-328.58	-325.56	0.0688	0.0692	0.0697	0.12641E-02	-0.62864E-04
5	50.0	-322.60	0.70	-319.35	-315.63	0.0701	0.0857	0.1147	0.46722E-02	0.67328E-03
6	62.5	-311.75	0.93	-307.87	-304.00	0.1311	0.1322	0.1334	0.90318E-02	-0.13704E-04
7	75.0	-300.14	0.92	-296.29	-292.44	0.1346	0.1359	0.1371	0.69005E-02	-0.20037E-03
8	87.5	-288.60	0.92	-284.77	-280.93	0.1385	0.1398	0.1412	0.66668E-02	0.10916E-03
9	100.0	-277.09	0.92	-273.26	-269.42	0.1426	0.1441	0.1456	0.61934E-02	-0.22713E-03
10	112.5	-265.57	0.92	-261.72	-257.87	0.1472	0.1488	0.1505	0.26602E-02	-0.26033E-03
11	125.0	-254.01	0.93	-250.14	-246.26	0.1522	0.1540	0.1558	0.56219E-03	-0.83608E-04
12	137.5	-242.38	0.93	-238.49	-234.59	0.1577	0.1597	0.1618	0.55643E-04	-0.11960E-04
13	150.0	-230.69	0.93	-226.76	-222.82	0.1639	0.1661	0.1684	0.24792E-05	-0.72857E-06

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: B (Continue)

14	162.5	-218.93	0.92	-214.93	-211.24	0.1708	0.1690	0.1635	-0.66635E-08	-0.33579E-07
15	175.0	-208.83	0.35	-206.37	-204.47	0.1609	0.1627	0.1640	0.14656E-07	-0.51599E-08
16	200.0	-202.66	0.23	-201.74	-200.89	0.1654	0.1660	0.1667	0.13184E-08	-0.10984E-08
17	212.5	-200.07	0.20	-199.25	-198.47	0.1673	0.1679	0.1685	0.29129E-09	0.88239E-10
18	225.0	-197.71	0.18	-196.97	-196.24	0.1691	0.1697	0.1703	-0.18243E-09	0.89526E-10
19	237.5	-195.54	0.17	-194.85	-194.19	0.1709	0.1714	0.1719	0.58204E-11	-0.16021E-10
20	250.0	-193.54	0.15	-192.90	-192.28	0.1725	0.1730	0.1735	0.52836E-11	-0.19586E-11
21	262.5	-191.67	0.14	-191.08	-190.50	0.1740	0.1745	0.1750	0.50010E-12	0.46348E-12
22	275.0	-189.93	0.13	-189.38	-188.83	0.1755	0.1760	0.1765	-0.37636E-12	0.18564E-12
23	287.5	-188.30	0.13	-187.78	-187.27	0.1769	0.1774	0.1778	-0.43562E-13	-0.10724E-13
24	300.0	-186.76	0.12	-186.27	-185.79	0.1783	0.1787	0.1791	0.15415E-13	-0.16011E-13
25	312.5	-185.31	0.11	-184.84	-184.38	0.1796	0.1800	0.1804	0.62239E-14	-0.16974E-14
26	325.0	-183.93	0.11	-183.48	-183.05	0.1808	0.1812	0.1816	-0.41076E-15	0.11370E-14
27	337.5	-182.61	0.10	-182.19	-181.77	0.1820	0.1824	0.1828	-0.63061E-15	0.27458E-15
28	350.0	-181.36	0.10	-180.95	-180.55	0.1832	0.1836	0.1840	-0.21910E-16	-0.79945E-16
29	362.5	-180.15	0.09	-179.76	-179.37	0.1844	0.1847	0.1851	0.58092E-16	-0.33510E-16
30	375.0	-178.99	0.09	-178.62	-178.24	0.1855	0.1858	0.1862	0.78137E-17	0.42837E-17
31	387.5	-177;88	0.09	-177.51	-177.16	0.1866	0.1869	0.1873	-0.45587E-17	0.37711E-17
32	400.0	-176.80	0.08	-176.45	-176.11	0.1876	0.1880	0.1883	-0.13081E-17	0.15851E-18
33	412.5	-175.76	0.08	-175.42	-175.09	0.1887	0.1890	0.1894	0.19842E-18	-0.30103E-18
34	425.0	-174.76	0.08	-174.43	-174.11	0.1897	0.1900	0.1904	0.13670E-18	-0.62336E-19
35	437.5	-173.79	0.08	-173.47	-173.16	0.1907	0.1910	0.1913	0.76094E-20	0.12802E-19
36	450.0	-172.85	0.07	-172.54	-172.24	0.1917	0.1920	0.1923	-0.91459E-20	0.68620E-20
37	462.5	-171.94	0.07	-171.65	-171.35	0.1926	0.1929	0.1932	-0.21318E-20	0.37377E-21
38	475.0	-171.06	0.07	-170.78	-170.50	0.1935	0.1938	0.1941	0.24841E-21	-0.41533E-21
39	487.5	-170.22	0.07	-169.94	-169.67	0.1944	0.1947	0.1950	0.18692E-21	-0.11056E-21
40	500.0	-169.40	0.06	-169.13	-168.87	0.1953	0.1956	0.1959	0.23098E-22	0.39085E-23
41	512.5	-168.61	0.06	-168.35	-168.10	0.1962	0.1965	0.1967	-0.67810E-23	0.77413E-23
42	525.0	-167.85	0.06	-167.60	-167.36	0.1970	0.1973	0.1975	-0.29258E-23	0.15118E-23
43	537.5	-167.12	0.06	-166.88	-166.65	0.1978	0.1981	0.1983	-0.24688E-24	-0.89950E-25
44	550.0	-166.42	0.05	-166.20	-165.98	0.1986	0.1988	0.1991	0.10168E-24	-0.10012E-24
45	562.5	-165.76	0.05	-165.55	-165.34	0.1993	0.1996	0.1998	0.33988E-25	-0.18336E-25
46	575.0	-165.13	0.05	-164.93	-164.74	0.2000	0.2003	0.2005	0.28955E-26	0.35243E-27
47	587.5	-164.55	0.05	-164.36	-164.18	0.2007	0.2009	0.2011	-0.80846E-27	0.79653E-27
48	600.0	-164.00	0.04	-163.67	-163.36	0.2013	0.2017	0.2021	-0.30801E-27	0.91478E-28
49	625.0	-163.08	0.03	-162.82	-162.60	0.2024	0.2027	0.2029	-0.37104E-28	0.14133E-28
50	650.0	-162.43	0.02	-162.29	-162.21	0.2032	0.2033	0.2034	-0.75951E-29	0.24523E-29
51	675.0	-162.19	0.00	-162.24	-162.37	0.2034	0.2034	0.2032	-0.11199E-29	0.19415E-30
52	700.0	-162.60	-0.03	-162.95	-163.45	0.2029	0.2025	0.2020	0.70006E-32	-0.58913E-31
53	725.0	-164.12	-0.09	-165.00	-166.14	0.2012	0.2002	0.1989	0.52373E-31	-0.31556E-31
54	750.0	-167.62	-0.20	-169.49	-171.90	0.1973	0.1952	0.1926	0.21161E-31	-0.10124E-31
55	775.0	-174.99	-0.42	-178.98	-184.21	0.1895	0.1855	0.1806	0.54473E-32	-0.28586E-32
56	800.0	-191.10	-0.94	-200.56	-213.97	0.1745	0.1669	0.1575	0.17301E-32	-0.89738E-33
57	825.0	-232.39	-2.56	-262.10	-298.51	0.1466	0.1330	0.1211	0.53557E-33	-0.26091E-33
58	850.0	-326.37	-2.22	-337.14	-338.22	0.1143	0.1121	0.1119	0.14980E-33	-0.73645E-34
59	875.0	-338.33	-0.30	-339.85	-340.31	0.1118	0.1115	0.1115	0.42845E-34	-0.20784E-34

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 57.122
MOISTURE INCREASE IN PROFILE......... 56.994

**********NORMAL TERMINATION AT TIME = 320.31463 DAYS AND STEP NUMBER = 756

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: C

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##############################################################################
#                                                                            #
#        ONE-DIMENSIONAL UNSATURATED TRANSPORT                               #
#                                                                            #
#     SUMAT43    data source: GLEAMS OUTPUT                                  #
#     NODE WIDTH= 12.5,      TMAX:  320   FOR  AVG.  YEAR                    #
#     ATRAZINE,  HIGH RAINFALL,  CN: C                                       #
#                                                                            #
##############################################################################

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   57
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP..................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1.............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2...........(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3..............(WRITE MATERIAL PROPERTIES)..........    4
KOD4..........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

GLEAMS-ATZ-HI-C   ###########################################################
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ELAPSED TIME	DAYS	HOURS	MINUTES	DELT	ISTEP	NIT	NITT
	319.8146	7675.5512	0.4605E+06	0.5000E+00	755	1	1855

		PRESSURE HEAD				MOISTURE CONTENT			CONCENTRATION	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-363.36	1.00	-359.29	-355.40	0.0649	0.0654	0.0658	0.13441E-04	0.00000E+00
2	12.5	-351.67	0.88	-348.07	-344.60	0.0663	0.0667	0.0671	0.55860E-03	0.17026E-04
3	25.0	-341.23	0.80	-337.96	-334.77	0.0675	0.0680	0.0684	0.23134E-03	0.10293E-03
4	37.5	-331.65	0.74	-328.58	-325.56	0.0688	0.0692	0.0697	0.12580E-02	-0.63497E-04
5	50.0	-322.60	0.70	-319.35	-315.63	0.0701	0.0857	0.1147	0.46729E-02	0.67481E-03
6	62.5	-311.75	0.93	-307.87	-304.00	0.1311	0.1322	0.1334	0.91044E-02	-0.69367E-05
7	75.0	-300.14	0.92	-296.29	-292.44	0.1346	0.1359	0.1371	0.69638E-02	-0.20971E-03
8	87.5	-288.60	0.92	-284.77	-280.93	0.1385	0.1398	0.1412	0.66441E-02	0.10959E-03
9	100.0	-277.09	0.92	-273.26	-269.42	0.1426	0.1441	0.1456	0.62392E-02	-0.22127E-03
10	112.5	-265.57	0.92	-261.72	-257.87	0.1472	0.1488	0.1505	0.27172E-02	-0.26333E-03
11	125.0	-254.01	0.93	-250.14	-246.26	0.1522	0.1540	0.1558	0.58124E-03	-0.85850E-04
12	137.5	-242.38	0.93	-238.49	-234.59	0.1577	0.1597	0.1618	0.58450E-04	-0.12486E-04
13	150.0	-230.69	0.93	-226.76	-222.82	0.1639	0.1661	0.1684	0.26199E-05	-0.76282E-06

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under High Rainfall Year And CN: C (Continue)

14	162.5	-218.93	0.92	-214.93	-211.24	0.1708	0.1690	0.1635	-0.35863E-08	-0.36344E-07
15	175.0	-208.83	0.35	-206.37	-204.47	0.1609	0.1627	0.1640	0.15028E-07	-0.52337E-08
16	200.0	-202.66	0.23	-201.74	-200.89	0.1654	0.1660	0.1667	0.13771E-08	-0.10771E-08
17	212.5	-200.07	0.20	-199.25	-198.47	0.1673	0.1679	0.1685	0.26052E-09	0.11663E-09
18	225.0	-197.71	0.18	-196.97	-196.24	0.1691	0.1697	0.1703	-0.19525E-09	0.88310E-10
19	237.5	-195.54	0.17	-194.85	-194.19	0.1709	0.1714	0.1719	0.10225E-10	-0.17467E-10
20	250.0	-193.53	0.15	-192.90	-192.28	0.1725	0.1730	0.1735	0.51575E-11	-0.18050E-11
21	262.5	-191.67	0.14	-191.08	-190.50	0.1740	0.1745	0.1750	0.42531E-12	0.50861E-12
22	275.0	-189.93	0.13	-189.38	-188.83	0.1755	0.1760	0.1765	-0.38532E-12	0.18516E-12
23	287.5	-188.30	0.13	-187.78	-187.27	0.1769	0.1774	0.1778	-0.42757E-13	-0.13054E-13
24	300.0	-186.76	0.12	-186.27	-185.79	0.1783	0.1787	0.1791	0.16730E-13	-0.16607E-13
25	312.5	-185.31	0.11	-184.84	-184.38	0.1796	0.1800	0.1804	0.63320E-14	-0.14987E-14
26	325.0	-183.93	0.11	-183.48	-183.05	0.1808	0.1812	0.1816	-0.57281E-15	0.12344E-14
27	337.5	-182.61	0.10	-182.19	-181.77	0.1820	0.1824	0.1828	-0.65605E-15	0.25960E-15
28	350.0	-181.36	0.10	-180.95	-180.55	0.1832	0.1836	0.1840	-0.53278E-17	-0.92115E-16
29	362.5	-180.15	0.09	-179.76	-179.37	0.1844	0.1847	0.1851	0.62080E-16	-0.33024E-16
30	375.0	-178.99	0.09	-178.62	-178.24	0.1855	0.1858	0.1862	0.65139E-17	0.55404E-17
31	387.5	-177.88	0.09	-177.51	-177.16	0.1866	0.1869	0.1873	-0.50603E-17	0.38538E-17
32	400.0	-176.80	0.08	-176.45	-176.10	0.1876	0.1880	0.1883	-0.12420E-17	0.51129E-19
33	412.5	-175.76	0.08	-175.42	-175.09	0.1887	0.1890	0.1894	0.25031E-18	-0.32250E-18
34	425.0	-174.76	0.08	-174.43	-174.11	0.1897	0.1900	0.1904	0.13807E-18	-0.56185E-19
35	437.5	-173.79	0.08	-173.47	-173.16	0.1907	0.1910	0.1913	0.35841E-20	0.15482E-19
36	450.0	-172.85	0.07	-172.54	-172.24	0.1917	0.1920	0.1923	-0.98685E-20	0.68197E-20
37	462.5	-171.94	0.07	-171.64	-171.35	0.1926	0.1929	0.1932	-0.19489E-20	0.17318E-21
38	475.0	-171.06	0.07	-170.78	-170.49	0.1935	0.1938	0.1941	0.32931E-21	-0.44776E-21
39	487.5	-170.21	0.07	-169.94	-169.66	0.1944	0.1947	0.1950	0.18798E-21	-0.10227E-21
40	500.0	-169.40	0.06	-169.13	-168.87	0.1953	0.1956	0.1959	0.17972E-22	0.75653E-23
41	512.5	-168.61	0.06	-168.35	-168.10	0.1962	0.1965	0.1967	-0.77876E-23	0.78473E-23
42	525.0	-167.85	0.06	-167.60	-167.36	0.1970	0.1973	0.1975	-0.27757E-23	0.12922E-23
43	537.5	-167.12	0.06	-166.88	-166.65	0.1978	0.1981	0.1983	-0.15219E-24	-0.13948E-24
44	550.0	-166.42	0.05	-166.19	-165.97	0.1986	0.1988	0.1991	0.11032E-24	-0.96040E-25
45	562.5	-165.76	0.05	-165.54	-165.33	0.1993	0.1996	0.1998	0.29825E-25	-0.14372E-25
46	575.0	-165.13	0.05	-164.93	-164.73	0.2000	0.2003	0.2005	0.15226E-26	0.95416E-27
47	587.5	-164.54	0.05	-164.35	-164.17	0.2007	0.2009	0.2011	-0.84537E-27	0.70334E-27
48	600.0	-163.99	0.04	-163.66	-163.35	0.2013	0.2017	0.2021	-0.22666E-27	0.64006E-28
49	625.0	-163.06	0.03	-162.81	-162.58	0.2024	0.2027	0.2030	-0.24414E-28	0.86911E-29
50	650.0	-162.40	0.02	-162.26	-162.18	0.2032	0.2033	0.2034	-0.45101E-29	0.12474E-29
51	675.0	-162.15	0.00	-162.19	-162.32	0.2035	0.2034	0.2033	-0.44233E-30	-0.25776E-32
52	700.0	-162.54	-0.03	-162.89	-163.39	0.2030	0.2026	0.2020	0.94886E-31	-0.58788E-31
53	725.0	-164.03	-0.09	-164.94	-166.15	0.2013	0.2003	0.1989	0.40620E-31	-0.16661E-31
54	750.0	-167.53	-0.17	-169.65	-172.54	0.1974	0.1950	0.1920	0.95961E-32	-0.31509E-32
55	775.0	-175.24	-0.28	-181.02	-189.82	0.1892	0.1835	0.1756	0.81082E-33	-0.62013E-33
56	800.0	-195.71	-0.30	-235.16	-304.25	0.1707	0.1452	0.1195	0.50608E-33	-0.29745E-33
57	825.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 57.223
MOISTURE INCREASE IN PROFILE......... 55.898

**********NORMAL TERMINATION AT TIME = 320.31463 DAYS AND STEP NUMBER = 756

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: A, B, C

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*****************************************************************************
*                                                                           *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                              *
*                                                                           *
*     SUMAT43    data source: GLEAMS OUTPUT                                 *
*     NODE WIDTH= 12.5,      TMAX:  320   FOR  AVG.  YEAR                   *
*     ATRAZINE,  AVERAGE RAINFALL,  CN: A, B, C                             *
*                                                                           *
*****************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............   61
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........  0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........  0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........  0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 320.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 160.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............  0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........  0.50000
ITERATION TOLERANCE.................(TOL1)...........  0.50000
ITERATION TOLERANCE.................(TOL2)...........  0.00000
KRAIN.........................(RAINFALL CODE)..........   1
KDRAIN........................(DRAINAGE CODE)..........   2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........   0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......   0
KOD3...............(WRITE MATERIAL PROPERTIES)..........   4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......   0

GLEAMS-ATZ-AV-A,B,C  ********************************************************************

ELAPSED TIME     DAYS      HOURS       MINUTES        DELT                     ISTEP    NIT   NITT
              320.0549 7681.3176     0.4609E+06   0.5000E+00                    732      1    1418
```

		PRESSURE HEAD				MOISTURE CONTENT			CONCENTRATION	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-378.67	1.00	-374.58	-370.63	0.0634	0.0638	0.0642	0.10109E-01	0.00000E+00
2	12.5	-366.81	0.90	-363.10	-359.49	0.0646	0.0650	0.0654	0.78312E-02	-0.45245E-03
3	25.0	-355.97	0.84	-352.52	-349.14	0.0658	0.0662	0.0665	0.55956E-02	-0.74762E-04
4	37.5	-345.82	0.79	-342.55	-339.32	0.0670	0.0674	0.0678	0.33096E-02	-0.18580E-03
5	50.0	-336.13	0.76	-332.70	-328.89	0.0682	0.0834	0.1115	0.89103E-03	-0.16590E-03
6	62.5	-324.94	0.95	-321.01	-317.08	0.1274	0.1285	0.1296	0.51043E-04	-0.13246E-04
7	75.0	-313.16	0.94	-309.25	-305.35	0.1307	0.1318	0.1330	0.13639E-07	-0.62147E-06
8	87.5	-301.45	0.93	-297.55	-293.66	0.1342	0.1355	0.1367	-0.13305E-06	0.32020E-07
9	100.0	-289.77	0.93	-285.88	-281.99	0.1381	0.1394	0.1408	-0.17336E-07	-0.86738E-08
10	112.5	-278.10	0.93	-274.21	-270.31	0.1422	0.1437	0.1453	0.15309E-07	-0.49736E-08
11	125.0	-266.41	0.94	-262.50	-258.59	0.1468	0.1485	0.1502	-0.10873E-08	0.46988E-09
12	137.5	-254.67	0.94	-250.74	-246.81	0.1519	0.1537	0.1556	-0.46250E-09	0.13135E-09
13	150.0	-242.88	0.94	-238.93	-234.96	0.1575	0.1595	0.1616	0.30353E-10	-0.39897E-10

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under Average Rainfall Year And CN: A, B, C (Continue)

14	162.5	-231.05	0.93	-227.02	-223.30	0.1637	0.1617	0.1560	0.24148E-10	-0.99846E-11
15	175.0	-220.81	0.37	-218.17	-216.12	0.1532	0.1548	0.1561	-0.21575E-13	0.28609E-12
16	200.0	-214.15	0.25	-213.15	-212.22	0.1574	0.1580	0.1586	0.45574E-12	0.36440E-12
17	212.5	-211.31	0.22	-210.42	-209.55	0.1593	0.1599	0.1604	-0.33021E-12	0.46572E-12
18	225.0	-208.71	0.20	-207.89	-207.10	0.1610	0.1616	0.1622	-0.18800E-12	0.35686E-13
19	237.5	-206.32	0.18	-205.57	-204.83	0.1627	0.1632	0.1638	0.12051E-13	-0.29482E-13
20	250.0	-204.12	0.17	-203.42	-202.75	0.1643	0.1648	0.1653	0.13949E-13	-0.80118E-14
21	262.5	-202.09	0.16	-201.46	-200.84	0.1658	0.1663	0.1667	0.16841E-14	0.37134E-15
22	275.0	-200.24	0.14	-199.66	-199.10	0.1672	0.1676	0.1681	-0.54749E-15	0.60727E-15
23	287.5	-198.56	0.13	-198.03	-197.53	0.1685	0.1689	0.1693	-0.22964E-15	0.11532E-15
24	300.0	-197.04	0.11	-196.58	-196.14	0.1697	0.1700	0.1704	-0.19033E-16	-0.12020E-16
25	312.5	-195.71	0.10	-195.31	-194.93	0.1707	0.1710	0.1713	0.10100E-16	-0.10856E-16
26	325.0	-194.57	0.08	-194.24	-193.93	0.1716	0.1719	0.1722	0.39520E-17	-0.22157E-17
27	337.5	-193.64	0.07	-193.38	-193.15	0.1724	0.1726	0.1728	0.46102E-18	0.77279E-19
28	350.0	-192.95	0.04	-192.78	-192.64	0.1730	0.1731	0.1732	-0.12106E-18	0.17278E-18
29	362.5	-192.54	0.02	-192.47	-192.44	0.1733	0.1734	0.1734	-0.67915E-19	0.50975E-19
30	375.0	-192.46	-0.01	-192.52	-192.62	0.1734	0.1733	0.1732	-0.14401E-19	0.57997E-20
31	387.5	-192.78	-0.04	-193.00	-193.28	0.1731	0.1729	0.1727	-0.52921E-21	-0.13330E-20
32	400.0	-193.62	-0.09	-194.03	-194.53	0.1724	0.1721	0.1717	0.73855E-21	-0.87571E-21
33	412.5	-195.11	-0.15	-195.78	-196.56	0.1712	0.1707	0.1700	0.30690E-21	-0.24858E-21
34	425.0	-197.46	-0.23	-198.48	-199.65	0.1693	0.1685	0.1676	0.70949E-22	-0.41958E-22
35	437.5	-200.98	-0.34	-202.48	-204.19	0.1666	0.1655	0.1642	0.89381E-23	-0.12867E-23
36	450.0	-206.12	-0.49	-208.31	-210.79	0.1628	0.1613	0.1596	-0.73245E-24	0.20840E-23
37	462.5	-213.61	-0.72	-216.81	-220.45	0.1577	0.1557	0.1534	-0.84260E-24	0.96614E-24
38	475.0	-224.61	-1.06	-229.35	-234.78	0.1509	0.1483	0.1454	-0.31176E-24	0.29733E-24
39	487.5	-240.99	-1.59	-248.10	-256.19	0.1422	0.1389	0.1354	-0.86512E-25	0.77757E-25
40	500.0	-265.29	-2.31	-275.41	-286.25	0.1318	0.1281	0.1246	-0.21504E-25	0.19436E-25
41	512.5	-297.31	-2.65	-307.80	-316.87	0.1214	0.1186	0.1164	-0.53601E-26	0.49842E-26
42	525.0	-323.95	-1.42	-328.86	-332.06	0.1148	0.1138	0.1131	-0.14021E-26	0.13229E-26
43	537.5	-333.98	-0.34	-335.10	-335.74	0.1127	0.1125	0.1124	-0.37632E-27	0.35503E-27
44	550.0	-336.08	-0.06	-336.27	-336.38	0.1123	0.1122	0.1122	-0.10114E-27	0.94924E-28
45	562.5	-336.43	-0.01	-336.46	-336.48	0.1122	0.1122	0.1122	-0.27001E-28	0.25165E-28
46	575.0	-336.49	0.00	-336.49	-336.50	0.1122	0.1122	0.1122	-0.71598E-29	0.65876E-29
47	587.5	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	-0.19451E-29	0.16424E-29
48	600.0	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	-0.63114E-30	0.21225E-30
49	625.0	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	-0.94974E-31	0.44517E-31
50	650.0	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	-0.25169E-31	0.12094E-31
51	675.0	-336.50	0.00	-336.50	-336.50	0.1122	0.1122	0.1122	-0.69269E-32	0.33296E-32
52	700.0	-336.50	0.00	-336.50	-336.51	0.1122	0.1122	0.1122	-0.19076E-32	0.91612E-33
53	725.0	-336.51	0.00	-336.51	-336.52	0.1122	0.1122	0.1122	-0.52471E-33	0.25172E-33
54	750.0	-336.53	0.00	-336.54	-336.56	0.1122	0.1122	0.1122	-0.14412E-33	0.69066E-34
55	775.0	-336.58	0.00	-336.61	-336.66	0.1122	0.1122	0.1122	-0.39527E-34	0.18920E-34
56	800.0	-336.72	-0.01	-336.79	-336.89	0.1122	0.1121	0.1121	-0.10823E-34	0.51742E-35
57	825.0	-337.02	-0.02	-337.18	-337.39	0.1121	0.1121	0.1120	-0.29587E-35	0.14125E-35
58	850.0	-337.66	-0.04	-337.99	-338.40	0.1120	0.1119	0.1118	-0.80762E-36	0.38474E-36
59	875.0	-338.91	-0.07	-339.54	-340.31	0.1117	0.1116	0.1115	-0.22106E-36	0.10409E-36

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 23.922
MOISTURE INCREASE IN PROFILE......... 23.623

**********NORMAL TERMINATION AT TIME = 320.05490 DAYS AND STEP NUMBER = 732

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine Under Low Rainfall Year And CN: A, B, C

```
***************************************************************************
*                                                                         *
*        ONE-DIMENSIONAL UNSATURATED TRANSPORT                            *
*                                                                         *
*     SUMAT53    data source: GLEAMS OUTPUT                               *
*     NODE WIDTH= 12.5,      TMAX:  264   FOR LOW  YEAR                   *
*     ATRAZINE,  LOW RAINFALL,  CN: A, B, C                               *
*                                                                         *
***************************************************************************

INPUT PARAMETERS
================
NUMBER OF NODES......................(NN)...............    43
MAXIMUM NUMBER OF TIME STEPS.......(NSTEPS)............. 5000
INITIAL TIME STEP...................(DELT)...........   0.00050
MINIMUM ALLOWABLE TIME STEP........(DELMIN)..........   0.00005
MAXIMUM ALLOWABLE TIME STEP........(DELMAX)..........   0.50000
MAXIMUM SIMULATION TIME.............(TMAX)........... 264.00000
PRINT DELT FOR OUTPUT..............(PRDEL)........... 132.00000
PULSE LENGTH FOR 1ST-TYPE BC......(PULSE)............   0.00000
WEIGHTING COEFFICIENT...............(EPSI)...........   0.50000
ITERATION TOLERANCE.................(TOL1)...........   0.50000
ITERATION TOLERANCE.................(TOL2)...........   0.00000
KRAIN.........................(RAINFALL CODE)..........    1
KDRAIN........................(DRAINAGE CODE)..........    2
KOD1..............(OUTPUT FOR EVERY ITERATION)..........    0
KOD2............(INPUT VARIABLE IS PRESSURE HEAD).......    0
KOD3...............(WRITE MATERIAL PROPERTIES)..........    4
KOD4...........(SOLVE ONLY FOR FLOW OR TRANSPORT).......    0

GLEAMS-ATZ-LO-A,B,C    ******************************************************************

ELAPSED TIME    DAYS      HOURS       MINUTES       DELT                          ISTEP   NIT   NITT
             263.7790 6330.6966   0.3798E+06   0.5000E+00                         602     1    955
```

		---------PRESSURE HEAD--------				---MOISTURE CONTENT---			--------CONCENTRATION---------	
NODE	DEPTH	FUNCTN	GRAD	F(1/3)	F(2/3)	FUNCTN	F(1/3)	F(2/3)	CONCENTRATION	GRADIENT
1	0.0	-415.69	1.00	-411.61	-407.69	0.0604	0.0607	0.0610	0.53179E-02	0.00000E+00
2	12.5	-403.92	0.89	-400.28	-396.75	0.0613	0.0615	0.0618	0.29438E-02	-0.43502E-03
3	25.0	-393.31	0.81	-389.97	-386.69	0.0621	0.0624	0.0627	0.24897E-03	-0.60645E-04
4	37.5	-383.48	0.76	-380.32	-377.20	0.0630	0.0633	0.0636	-0.33311E-05	0.23288E-05
5	50.0	-374.11	0.74	-370.73	-366.90	0.0639	0.0778	0.1039	-0.24414E-05	0.13434E-05
6	62.5	-362.93	0.95	-358.97	-355.02	0.1184	0.1193	0.1201	-0.55116E-07	0.50308E-07
7	75.0	-351.07	0.95	-347.13	-343.20	0.1210	0.1219	0.1228	0.40908E-08	-0.28451E-08
8	87.5	-339.27	0.94	-335.34	-331.42	0.1238	0.1247	0.1257	-0.48755E-08	-0.23585E-08
9	100.0	-327.49	0.94	-323.57	-319.64	0.1267	0.1278	0.1288	0.12726E-08	-0.14084E-08
10	112.5	-315.72	0.94	-311.79	-307.86	0.1299	0.1311	0.1322	0.66730E-09	-0.35600E-09

GLEAMS+FEM Output Of Pesticide Concentration For Atrazine
Under Low Rainfall Year And CN: A, B, C (Continue)

11	125.0	-303.93	0.94	-299.99	-296.05	0.1334	0.1347	0.1359	0.12610E-09	-0.40236E-10
12	137.5	-292.11	0.95	-288.15	-284.19	0.1373	0.1386	0.1400	0.45309E-11	0.52463E-11
13	150.0	-280.24	0.95	-276.27	-272.28	0.1414	0.1429	0.1445	-0.41741E-11	0.37033E-11
14	162.5	-268.35	0.93	-264.31	-260.57	0.1460	0.1437	0.1377	-0.15275E-11	0.10332E-11
15	175.0	-258.08	0.37	-256.98	-256.43	0.1346	0.1351	0.1353	-0.34908E-12	0.22911E-12
16	187.5	-255.91	0.16	-255.32	-254.88	0.1355	0.1358	0.1359	-0.68907E-13	0.56210E-13
17	200.0	-254.49	0.09	-254.14	-253.87	0.1361	0.1363	0.1364	-0.11724E-13	0.88602E-14
18	212.5	-253.65	0.05	-253.49	-253.39	0.1365	0.1365	0.1366	-0.17521E-14	0.12873E-14
19	225.0	-253.35	0.00	-253.37	-253.46	0.1366	0.1366	0.1366	-0.32627E-15	0.16473E-15
20	237.5	-253.61	-0.04	-253.83	-254.12	0.1365	0.1364	0.1363	-0.61579E-16	-0.30086E-16
21	250.0	-254.48	-0.10	-254.92	-255.43	0.1361	0.1359	0.1357	0.12585E-16	-0.49756E-16
22	262.5	-256.02	-0.15	-256.70	-257.47	0.1355	0.1352	0.1349	0.18879E-16	-0.28359E-16
23	275.0	-258.34	-0.22	-259.30	-260.37	0.1345	0.1341	0.1337	0.10002E-16	-0.11767E-16
24	287.5	-261.55	-0.30	-262.84	-264.26	0.1332	0.1327	0.1322	0.37796E-17	-0.38548E-17
25	300.0	-265.81	-0.39	-267.49	-269.32	0.1316	0.1310	0.1303	0.11707E-17	-0.10852E-17
26	312.5	-271.29	-0.49	-273.42	-275.70	0.1296	0.1288	0.1280	0.31471E-18	-0.27118E-18
27	325.0	-278.15	-0.61	-280.76	-283.52	0.1272	0.1264	0.1255	0.75480E-19	-0.60880E-19
28	337.5	-286.44	-0.72	-289.51	-292.70	0.1246	0.1236	0.1227	0.16270E-19	-0.12141E-19
29	350.0	-295.99	-0.80	-299.37	-302.79	0.1218	0.1208	0.1199	0.30858E-20	-0.20164E-20
30	362.5	-306.21	-0.82	-309.58	-312.86	0.1190	0.1182	0.1174	0.46611E-21	-0.20161E-21
31	375.0	-316.00	-0.73	-318.94	-321.65	0.1166	0.1159	0.1153	0.28442E-22	0.35711E-22
32	387.5	-324.10	-0.56	-326.28	-328.19	0.1148	0.1143	0.1139	-0.17698E-22	0.33225E-22
33	400.0	-329.82	-0.36	-331.20	-332.34	0.1136	0.1133	0.1130	-0.11427E-22	0.15189E-22
34	412.5	-333.28	-0.20	-334.05	-334.67	0.1128	0.1127	0.1126	-0.48469E-23	0.57509E-23
35	425.0	-335.16	-0.11	-335.56	-335.88	0.1125	0.1124	0.1123	-0.17776E-23	0.19895E-23
36	437.5	-336.13	-0.06	-336.34	-336.52	0.1123	0.1122	0.1122	-0.60401E-24	0.65158E-24
37	450.0	-336.67	-0.03	-336.80	-336.93	0.1122	0.1121	0.1121	-0.19546E-24	0.20538E-24
38	462.5	-337.04	-0.03	-337.16	-337.28	0.1121	0.1121	0.1120	-0.61067E-25	0.62872E-25
39	475.0	-337.41	-0.03	-337.55	-337.70	0.1120	0.1120	0.1120	-0.18563E-25	0.18794E-25
40	487.5	-337.86	-0.04	-338.03	-338.22	0.1119	0.1119	0.1119	-0.55184E-26	0.55032E-26
41	500.0	-338.43	-0.05	-338.67	-338.92	0.1118	0.1118	0.1117	-0.16172E-26	0.15748E-26
42	512.5	-339.20	-0.07	-339.55	-339.11	0.1117	0.1116	0.1117	-0.49625E-27	0.41396E-27
43	525.0	-336.50	1.00			0.1122			0.000	0.000

INFILTRATION RATE................ 0.000
DRAINAGE RATE.................... 0.000

MOISTURE ADDED TO PROFILE............ 8.926
MOISTURE INCREASE IN PROFILE......... 8.629

**********NORMAL TERMINATION AT TIME = 264.27902 DAYS AND STEP NUMBER = 603

APPENDIX H

STATISTICAL COMPARISONS FOR PRZM AND GLEAMS

PROGRAMMING OF GLM PROCEDURES USED TO COMPARE PRZM AND GLEAMS

Programming GLM to compare PRZM and GLEAMS:

```
DATA A, INFILE PESTFLUX, INPUT PMODEL $ PESTCIDE $ RAINFALL &
CURVENO $  FLUX;
PROC GLM; CALSS PMODEL PESTCIDE RAINFALL CURVENO;
MODEL FLUX = PMODEL PESTCIDE RAINFALL CURVENO PMODEL*PESTCIDE
PMODEL*RAINFALL PMODEL*CURVENO PESTCIDE*RAINFALL
PESTCIDE*CURVENO RAINFALL*CURVENO;
  MANOVA H = _ALL_;
  MEANS PMODEL PESTCIDE RAINFALL CURVENO
PMODEL*PESTCIDE PMODEL*RAINFALL PMODEL*CURVENO
PESTCIDE*RAINFALL PESTCIDE*CURVENO RAINFALL*CURVENO
PMODEL*PESTCIDE*RAINFALL PMODEL*PESTCIDE*CURVENO
PMODEL*RAINFALL*CURVENO  PESTCIDE*RAINFALL*CURVENO
PMODEL*PESTCIDE*RAINFALL*CURVENO;
RUN;
```

Programming GLM to compare PRZM, PRZM+FEM and GLEAMS+FEM:

```
DATA A; INFILE STATIS; INPUT PMODEL $ PESTCIDE $ RAINFALL $
CURVENO $ PEAKBASE $ PEAKEXP $ DEPTH $ MASSBASE $ MASSEXP;
PEAKCONC= PEAKBASE*(10**EXP); MASS= MASSBASE*(10**MASSEXP);
PROC GLM; CLASSES PMODEL PESTCIDE RAINFALL CURVENO;
MODEL PEAKCONC DEPTH MASS = PMODEL PESTCIDE RAINFALL CURVENO
PMODEL*PESTCIDE PMODEL*RAINFALL PMODEL*CURVENO
PESTCIDE*RAINFALL PESTCIDE*CURVENO RAINFALL*CURVENO;
  MANOVA H = _ALL_;
  MEANS PMODEL PESTCIDE RAINFALL CURVENO
PMODEL*PESTCIDE PMODEL*RAINFALL PMODEL*CURVENO
PESTCIDE*RAINFALL PESTCIDE*CURVENO RAINFALL*CURVENO
PMODEL*PESTCIDE*RAINFALL PMODEL*PESTCIDE*CURVENO
PMODEL*RAINFALL*CURVENO  PESTCIDE*RAINFALL*CURVENO
PMODEL*PESTCIDE*RAINFALL*CURVENO;
RUN;
```

ANOVA FOR PESTICIDE LEACHING FLUX AT THE BASE OF THE ROOT ZONE

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : PESTICIDE FLUX

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	25	2061500.662977	82460.02652	152.10
ERROR	28	15179.633342	542.12976	
CORRECTED TOTAL	53	2076680.296319		

PR > F	R-SQUARE	C.V.
0.0001	0.99269	12.1123

ROOT MSE	FLUX MEAN
23.23869017	192.2312076

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	1	135796.1714196	250.49	0.0001
PESTICIDE	2	1279470.604703	1180.04	0.0001
RAINFALL	2	327678.1983087	302.21	0.0001
CURVE NO.	2	1.8696766	0.00	0.9983
PMODEL*PESTICIDE	2	92657.0029006	85.46	0.0001
PMODEL*RAINFALL	2	13446.4645466	12.40	0.0001
PMODEL*CURVE NO.	2	1.7772911	0.00	0.9984
PESTICIDE*RAINFALL	4	212445.9394884	97.97	0.0001
PESTICIDE*CURVE NO.	4	2.2928680	0.00	1.0000
RAINFALL*CURVE NO.	4	0.3417744	0.00	1.0000

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	1	135796.1714196	250.49	0.0001
PESTICIDE	2	1279470.604703	1180.04	0.0001
RAINFALL	2	327678.1983087	302.21	0.0001
CURVE NO.	2	1.8696766	0.00	0.9983
PMODEL*PESTICIDE	2	92657.0029006	85.46	0.0001
PMODEL*RAINFALL	2	13446.4645466	12.40	0.0001
PMODEL*CURVE NO.	2	1.7772911	0.00	0.9984
PESTICIDE*RAINFALL	4	212445.9394884	97.97	0.0001
PESTICIDE*CURVE NO.	4	2.2928680	0.00	1.0000
RAINFALL*CURVE NO.	4	0.3417744	0.00	1.0000

ANOVA FOR PESTICIDE LEACHING FLUX IN THE INDIVIDUAL CONDITION OF HIGH RAINFALL YEAR

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : PESTICIDE FLUX IN HIGH RAINFALL YEAR

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	7	817665.73357396	116809.390511	99999.99
ERROR	10	5.11608167	0.51160817	
CORRECTED TOTAL	17	817670.84965562		

PR > F	R-SQUARE	C.V.
0.0001	0.999994	0.2700

ROOT MSE	FLUX MEAN
0.71526790	264.96151667

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	1	60696.7035478	99999.99	0.0001
RAINFALL	2	706470.4339731	99999.99	0.0001
CURVE NO.	2	1.0958523	1.07	0.3789
PMODEL*RAINFALL	2	50497.5002006	49351.73	0.00001

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	1	60696.7035478	99999.99	0.0001
RAINFALL	2	706470.4339731	99999.99	0.0001
CURVE NO.	2	1.0958523	1.07	0.3789
PMODEL*RAINFALL	2	50497.5002006	49351.73	0.00001

ANOVA FOR PESTICIDE LEACHING FLUX IN THE INDIVIDUAL CONDITION OF AVERAGE RAINFALL YEAR

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : PESTICIDE FLUX IN AVERAGE RAINFALL YEAR

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	7	74314.28733243	117011.806264	99999.99
ERROR	10	4.65888889	0.465888889	
CORRECTED TOTAL	17	819087.3027336		

PR > F	R-SQUARE	C.V.
0.0001	0.999994	0.300

ROOT MSE	FLUX MEAN
0.68256054	227.5242611

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	1	74314.2873324	99999.99	0.0001
RAINFALL	2	695022.7311496	99999.99	0.0001
CURVE NO.	2	1.0077778	1.08	0.3756
PMODEL*RAINFALL	2	49744.6175848	53386.78	0.0001

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	1	74314.2873324	99999.99	0.0001
RAINFALL	2	695022.7311496	99999.99	0.0001
CURVE NO.	2	1.0077778	1.08	0.3756
PMODEL*RAINFALL	2	49744.6175848	53386.78	0.0001

ANOVA FOR PESTICIDE LEACHING FLUX IN THE INDIVIDUAL CONDITION OF LOW RAINFALL YEAR

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : PESTICIDE FLUX IN LOW RAINFALL YEAR

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	7	112243.40677532	16034.7723965	99999.99
ERROR	10	0.53884580	0.05388458	
CORRECTED TOTAL	17	112243.94562112		

PR > F	R-SQUARE	C.V.
0.0001	0.999995	0.2757

ROOT MSE	FLUX MEAN
0.23213052	84.207845

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	1	14231.6450859	99999.99	0.0001
RAINFALL	2	90423.3790686	99999.99	0.0001
CURVE NO.	2	1.0782089	1.00	0.4017
PMODEL*RAINFALL	2	7588.2747999	70412.30	0.0001

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	1	14231.6450859	99999.99	0.0001
RAINFALL	2	90423.3790686	99999.99	0.0001
CURVE NO.	2	1.0782089	1.00	0.4017
PMODEL*RAINFALL	2	7588.2747999	70412.30	0.0001

ANOVA FOR PESTICIDE LEACHING FLUX IN THE INDIVIDUAL CONDITION OF PESTICIDE: DICAMBA

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : PESTICIDE FLUX OF DICAMBA ONLY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	7	601013.8416667	85859.120238	99999.99
ERROR	10	0.52333333	0.052333333	
CORRECTED TOTAL	17	601014.3650000		

PR > F	R-SQUARE	C.V.
0.0001	0.999999	0.0603

ROOT MSE	FLUX MEAN
0.2287648	379.3500

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	1	192262.00500	9999.99	0.0001
RAINFALL	2	381677.80333	9999.99	0.0001
CURVE NO.	2	0.13000	1.24	0.3298
PMODEL*RAINFALL	2	27073.90333	9999.99	0.0001

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	1	192262.00500	9999.99	0.0001
RAINFALL	2	381677.80333	9999.99	0.0001
CURVE NO.	2	0.13000	1.24	0.3298
PMODEL*RAINFALL	2	27073.90333	9999.99	0.0001

ANOVA FOR PESTICIDE LEACHING FLUX IN THE INDIVIDUAL CONDITION OF PESTICID: 2,4-D

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : PESTICIDE FLUX OF 2,4-D ONLY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	5	144.54098706	28.90819741	7.30
ERROR	12	47.50057452	3.95838121	
CORRECTED TOTAL	17	192.04156159		

PR > F	R-SQUARE	C.V.
0.0024	0.752655	85.2039

ROOT MSE	FLUX MEAN
1.98956810	2.33506722

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	1	96.16075823	24.29	0.0003
RAINFALL	2	48.38022868	6.11	0.0148
CURVE NO.	2	0.00000016	0.00	1.0000

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	1	96.16075823	24.29	0.0003
RAINFALL	2	48.38022868	6.11	0.0148
CURVE NO.	2	0.00000016	0.00	1.0000

ANOVA FOR PESTICIDE LEACHING FLUX IN THE INDIVIDUAL CONDITION OF PESTICIDE: ATRAZINE

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : PESTICIDE FLUX OF ATRAZINE ONLY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	7	195995.4456656	27999.34938	35716.24
ERROR	10	7.83938889	0.78393889	
CORRECTED TOTAL	17	196003.2850544		

PR > F	R-SQUARE	C.V.
0.0001	0.999960	0.4540

ROOT MSE	FLUX MEAN
0.88540324	195.00855556

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	1	36095.008562	46043.14	0.0001
RAINFALL	2	158397.9542351	99999.99	0.0001
CURVE NO.	2	4.0325444	2.57	0.1255
PMODEL*RAINFALL	2	1498.4503240	955.72	0.0001

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	1	36095.008562	46043.14	0.0001
RAINFALL	2	158397.9542351	99999.99	0.0001
CURVE NO.	2	4.0325444	2.57	0.1255
PMODEL*RAINFALL	2	1498.4503240	955.72	0.0001

APPENDIX I

STATISTICAL COMPARISONS FOR PRZM, PRZM+FEM

AND GLEAMS+FEM

ANOVA FOR PEAK CONCENTRATION BELOW THE ROOT ZONE

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : PEAK CONCENTRATION

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	32	0.00043945	0.00001373	15.09
ERROR	48	0.00004367	0.00000091	
CORRECTED TOTAL	80	0.00048312		

PR > F	R-SQUARE	C.V.
0.0001	0.909607	51.3387

ROOT MSE	PEAK CONCENTRATIOIN MEAN
0.00095384	0.00185794

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	2	0.00005538	30.44	0.0001
PESTICIDE	2	0.00028618	157.27	0.0001
RAINFALL	2	0.00000002	0.01	0.9900
CURVE NO.	2	0.00000003	0.02	0.9832
PMODEL*PESTICIDE	4	0.00006329	17.39	0.0001
PMODEL*RAINFALL	4	0.00002500	6.87	0.0002
PMODEL*CURVE NO.	4	0.00000004	0.01	0.9998
PESTICIDE*RAINFALL	4	0.00000945	2.60	0.0478
PESTICIDE*CURVE NO.	4	0.00000006	0.02	0.9995
RAINFALL*CURVE NO.	4	0.00000001	0.00	1.0000

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	2	0.00005538	30.44	0.0001
PESTICIDE	2	0.00028618	157.27	0.0001
RAINFALL	2	0.00000002	0.01	0.9900
CURVE NO.	2	0.00000003	0.02	0.9832
PMODEL*PESTICIDE	4	0.00006329	17.39	0.0001
PMODEL*RAINFALL	4	0.00002500	6.87	0.0002
PMODEL*CURVE NO.	4	0.00000004	0.01	0.9998
PESTICIDE*RAINFALL	4	0.00000945	2.60	0.0478
PESTICIDE*CURVE NO.	4	0.00000006	0.02	0.9995
RAINFALL*CURVE NO.	4	0.00000001	0.00	1.0000

ANOVA FOR PENETRATED DEPTH OF PEAK CONCENTRATION

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : DEPTH OF PEAK CONCENTRATION

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	32	2006476.950617	62702.404707	137.46
ERROR	48	21895.518519	456.156636	
CORRECTED TOTAL	80	2028372.469136		

PR > F	R-SQUARE	C.V.
0.0001	0.989205	14.913

ROOT MSE	DEPTH OF PEAK CONC. MEAN
21.35782376	143.21604938

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	2	46364.82098765	50.82	0.0001
PESTICIDE	2	1244205.56172839	1363.79	0.0001
RAINFALL	2	322636.11728395	353.65	0.0001
CURVE NO.	2	50.93209877	0.06	0.9458
PMODEL*PESTICIDE	4	96412.97530864	52.84	0.0001
PMODEL*RAINFALL	4	12993.53086420	7.12	0.0001
PMODEL*CURVE NO.	4	31.49382716	0.02	0.9994
PESTICIDE*RAINFALL	4	283613.90123457	155.44	0.0001
PESTICIDE*CURVE NO.	4	101.86419753	0.06	0.9940
RAINFALL*CURVE NO.	4	65.75308642	0.04	0.9974

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	2	46364.82098765	50.82	0.0001
PESTICIDE	2	1244205.56172839	1363.79	0.0001
RAINFALL	2	322636.11728395	353.65	0.0001
CURVE NO.	2	50.93209877	0.06	0.9458
PMODEL*PESTICIDE	4	96412.97530864	52.84	0.0001
PMODEL*RAINFALL	4	12993.53086420	7.12	0.0001
PMODEL*CURVE NO.	4	31.49382716	0.02	0.9994
PESTICIDE*RAINFALL	4	283613.90123457	155.44	0.0001
PESTICIDE*CURVE NO.	4	101.86419753	0.06	0.9940
RAINFALL*CURVE NO.	4	65.75308642	0.04	0.9974

ANOVA FOR SOLUBLE MASS OF PESTICIDE BELOW THE ROOT ZONE

SAS GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE : SOLUBLE MASS OF PESTICIDE BELOW THE ROOT ZONE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE
MODEL	32	189.44440641	5.9201377	22.53
ERROR	48	12.61084575	0.26272595	
CORRECTED TOTAL	80	202.05525216		

PR > F	R-SQUARE	C.V.
0.0001	0.937587	39.3547

ROOT MSE	SOLUBLE MASS MEAN
0.512568	1.30243309

SOURCE	DF	TYPE I SS	F VALUE	PR > F
PMODEL	2	9.06263742	17.25	0.0001
PESTICIDE	2	82.90670164	157.78	0.0001
RAINFALL	2	20.79444329	39.57	0.0001
CURVE NO.	2	0.01346978	0.03	0.9747
PMODEL*PESTICIDE	4	14.3565873	13.66	0.0001
PMODEL*RAINFALL	4	5.32681482	5.07	0.0017
PMODEL*CURVE NO.	4	0.00573274	0.01	0.9999
PESTICIDE*RAINFALL	4	56.95061817	54.19	0.0001
PESTICIDE*CURVE NO.	4	0.0231513	0.02	0.9990
RAINFALL*CURVE NO.	4	0.00424993	0.00	1.0000

SOURCE	DF	TYPE III SS	F VALUE	PR > F
PMODEL	2	9.06263742	17.25	0.0001
PESTICIDE	2	82.90670164	157.78	0.0001
RAINFALL	2	20.79444329	39.57	0.0001
CURVE NO.	2	0.01346978	0.03	0.9747
PMODEL*PESTICIDE	4	14.3565873	13.66	0.0001
PMODEL*RAINFALL	4	5.32681482	5.07	0.0017
PMODEL*CURVE NO.	4	0.00573274	0.01	0.9999
PESTICIDE*RAINFALL	4	56.95061817	54.19	0.0001
PESTICIDE*CURVE NO.	4	0.0231513	0.02	0.9990
RAINFALL*CURVE NO.	4	0.00424993	0.00	1.0000

ANOVA FOR PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF HIGH RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

PEAK CONCENTRATION IN HIGH RAINFALL YEAR

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FE

-------------------- INPUT DATA --------------------

0.3236E-03	0.8435E-03	0.1094E-02
0.3182E-03	0.8323E-03	0.1091E-02
0.3113E-03	0.9055E-03	0.1090E-02
0.2899E-15	0.4851E-15	0.1513E-16
0.2908E-15	0.4755E-15	0.1513E-16
0.2915E-15	0.5418E-15	0.1513E-16
0.1260E-02	0.3964E-02	0.8873E-02
0.1258E-02	0.4044E-02	0.9032E-02
0.1248E-02	0.4078E-02	0.9104E-02

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.36904E-04	2	0.1845E-04	0.2539E+01
WITHIN GROUPS	0.17444E-03	24	0.7268E-05	
TOTALS	0.21134E-03	26	==> NON-SIGNIFICANT	

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.5243E-03

MEAN OF GROUP 2 = 0.1630E-02

MEAN OF GROUP 3 = 0.3365E-02

STANDARD ERROR OF THE MEANS= 0.8987E-03

r= 2 K = 2.920 C.Diff. = 0.262E-02

r= 3 K = 3.070 C.Diff. = 0.276E-02

GROUP 1 VS GROUP 2 TEST VALUE= 0.111E-02 < C.Diff.(0.262E-02) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.284E-02 > C.Diff.(0.276E-02) ==> SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.174E-02 < C.Diff.(0.262E-02) ==> NON-SIGNIFICANT

ANOVA FOR PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF AVERAGE RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

PEAK CONCENTRATION IN AVERAGE RAINFALL YEAR .

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.4555E-03	0.9294E-03	0.1437E-02
0.4509E-03	0.9271E-03	0.1437E-02
0.4448E-03	0.9236E-03	0.1437E-02
0.4036E-15	0.7132E-15	0.1493E-17
0.4037E-15	0.7323E-15	0.1493E-17
0.4037E-15	0.8251E-15	0.1493E-17
0.1450E-02	0.4664E-02	0.7831E-02
0.1453E-02	0.4978E-02	0.7831E-02
0.1452E-02	0.4914E-02	0.7831E-02

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.27153E-04	2	0.1358E-04	0.2210E+01
WITHIN GROUPS	0.14745E-03	24	0.6144E-05	
TOTALS	0.17460E-03	26	==> NON-SIGNIFICANT	

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.6340E-03

MEAN OF GROUP 2 = 0.1926E-02

MEAN OF GROUP 3 = 0.3089E-02

STANDARD ERROR OF THE MEANS= 0.8262E-03

r= 2 K = 2.920 C.Diff. = 0.241E-02

r= 3 K = 3.070 C.Diff. = 0.254E-02

GROUP 1 VS GROUP 2 TEST VALUE= 0.129E-02 < C.Diff.(0.241E-02) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.246E-02 < C.Diff.(0.254E-02) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.116E-02 < C.Diff.(0.241E-02) ==> NON-SIGNIFICANT

ANOVA FOR PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF LOW RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

INDIVIDUAL CONDITION OF PEAK CONC. IN LOW RAINFALL YEAR

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.7908E-03	0.2440E-02	0.1950E-02
0.7844E-03	0.2447E-02	0.1950E-02
0.7793E-03	0.2451E-02	0.1950E-02
0.6218E-15	0.3465E-15	0.1353E-18
0.6218E-15	0.3762E-15	0.1353E-18
0.6219E-15	0.3833E-15	0.1353E-18
0.2331E-02	0.5873E-02	0.2944E-02
0.2331E-02	0.6400E-02	0.2944E-02
0.2331E-02	0.6516E-02	0.2944E-02

********************* ONE-WAY ANOVA ANALYSIS TABLE *********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.16333E-04	2	0.8167E-05	0.2393E+01
WITHIN GROUPS	0.81910E-04	24	0.3413E-05	
TOTALS	0.98244E-04	26		==> NON-SIGNIFICANT

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.1039E-02

MEAN OF GROUP 2 = 0.2903E-02

MEAN OF GROUP 3 = 0.1631E-02

STANDARD ERROR OF THE MEANS= 0.6158E-03

r= 2 K = 2.920 C.Diff. = 0.180E-02

r= 3 K = 3.070 C.Diff. = 0.189E-02

GROUP 1 VS GROUP 2 TEST VALUE= 0.186E-02 > C.Diff.(0.180E-02) ==> SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.593E-03 < C.Diff.(0.189E-02) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.127E-02 < C.Diff.(0.180E-02) ==> NON-SIGNIFICANT

ANOVA FOR PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF PESTICIDE: DICAMBA AND DUNCAN'S MULTIPLE RANGE TEST

INDIVIDUAL CONDITION OF PEAK CONCENTRATION FOR DICAMBA

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.3236E-03	0.8435E-03	0.1094E-02
0.3182E-03	0.8323E-03	0.1091E-02
0.3113E-03	0.9055E-03	0.1090E-02
0.4555E-03	0.9294E-03	0.1437E-02
0.4509E-03	0.9271E-03	0.1437E-02
0.4448E-03	0.9236E-03	0.1437E-02
0.7908E-03	0.2440E-02	0.1950E-02
0.7844E-03	0.2447E-02	0.1950E-02
0.7793E-03	0.2451E-02	0.1950E-02

\# ONE-WAY ANOVA ANALYSIS TABLE \#

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.52679E-05	2	0.2634E-05	0.1004E+02
WITHIN GROUPS	0.62969E-05	24	0.2624E-06	
TOTALS	0.11565E-04	26		==> SIGNIFICANT

\# DUNCAN'S MULTIPLE RANGE TEST \#

MEAN OF GROUP 1 = 0.5176E-03

MEAN OF GROUP 2 = 0.1411E-02

MEAN OF GROUP 3 = 0.1493E-02

STANDARD ERROR OF THE MEANS= 0.1707E-03

r= 2 K = 2.920 C.Diff. = 0.499E-03

r= 3 K = 3.070 C.Diff. = 0.524E-03

GROUP 1 VS GROUP 2 TEST VALUE= 0.893E-03 > C.Diff.(0.499E-03) ==> SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.975E-03 > C.Diff.(0.524E-03) ==> SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.818E-04 < C.Diff.(0.499E-03) ==> NON-SIGNIFICANT

ANOVA FOR PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF PESTICIDE: 2,4-D AND DUNCAN'S MULTIPLE RANGE TEST

INDIVIDUAL CONDITION OF PEAK CONCENTRATION FOR 2,4-D

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.2899E-15	0.4851E-15	0.1513E-16
0.2908E-15	0.4755E-15	0.1513E-16
0.2915E-15	0.5418E-15	0.1513E-16
0.4036E-15	0.7132E-12	0.1493E-17
0.4037E-15	0.7323E-12	0.1493E-17
0.4037E-15	0.8251E-12	0.1493E-17
0.6218E-15	0.3465E-15	0.1353E-18
0.6218E-15	0.3762E-15	0.1353E-18
0.6219E-15	0.3833E-15	0.1353E-18

##################### ONE-WAY ANOVA ANALYSIS TABLE ####################

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.38210E-24	2	0.1911E-24	0.3982E+01
WITHIN GROUPS	0.11515E-23	24	0.4798E-25	
TOTALS	0.15336E-23	26		==> SIGNIFICANT

#################### DUNCAN'S MULTIPLE RANGE TEST ####################

MEAN OF GROUP 1 = 0.4387E-15

MEAN OF GROUP 2 = 0.2526E-12

MEAN OF GROUP 3 = 0.5586E-17

STANDARD ERROR OF THE MEANS= 0.7302E-13

r= 2 K = 2.920 C.Diff. = 0.213E-12

r= 3 K = 3.070 C.Diff. = 0.224E-12

GROUP 1 VS GROUP 2 TEST VALUE= 0.252E-12 > C.Diff.(0.213E-12) ==> SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.433E-15 < C.Diff.(0.224E-12) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.253E-12 > C.Diff.(0.213E-12) ==> SIGNIFICANT

ANOVA FOR PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF PESTICIDE: ATRAZINE AND DUNCAN'S MULTIPLE RANGE TEST

PEAK CONCENTATION FOR ATRAZINE

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.1260E-02	0.3964E-02	0.8873E-02
0.1258E-02	0.4044E-02	0.9032E-02
0.1248E-02	0.4078E-02	0.9104E-02
0.1450E-02	0.4664E-02	0.7831E-02
0.1453E-02	0.4978E-02	0.7831E-02
0.1452E-02	0.4914E-02	0.7831E-02
0.2331E-02	0.5873E-02	0.2944E-02
0.2331E-02	0.6400E-02	0.2944E-02
0.2331E-02	0.6516E-02	0.2944E-02

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.11362E-03	2	0.5681E-04	0.1896E+02
WITHIN GROUPS	0.71922E-04	24	0.2997E-05	
TOTALS	0.18555E-03	26		==> SIGNIFICANT

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.1679E-02

MEAN OF GROUP 2 = 0.5048E-02

MEAN OF GROUP 3 = 0.6593E-02

STANDARD ERROR OF THE MEANS= 0.5770E-03

r= 2 K = 2.920 C.Diff. = 0.168E-02

r= 3 K = 3.070 C.Diff. = 0.177E-02

GROUP 1 VS GROUP 2 TEST VALUE= 0.337E-02 > C.Diff.(0.168E-02) ==> SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.491E-02 > C.Diff.(0.177E-02) ==> SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.154E-02 < C.Diff.(0.168E-02) ==> NON-SIGNIFICANT

ANOVA FOR DEPTH OF PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF HIGH RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

PENETRATED DEPTH OF PEAK CONC. IN HIGH RAINFALL

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.6000E+03	0.5000E+03	0.3750E+03
0.6125E+03	0.5250E+03	0.3750E+03
0.6125E+03	0.5250E+03	0.3750E+03
0.2500E+02	0.3750E+02	0.7500E+02
0.2500E+02	0.3750E+02	0.7500E+02
0.2500E+02	0.3750E+02	0.7500E+02
0.1125E+03	0.1750E+03	0.8750E+02
0.1125E+03	0.1750E+03	0.8750E+02
0.1125E+03	0.1750E+03	0.8750E+02

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.26806E+05	2	0.1340E+05	0.2841E+00
WITHIN GROUPS	0.11324E+07	24	0.4718E+05	
TOTALS	0.11592E+07	26	==> NON-SIGNIFICANT	

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.2486E+03

MEAN OF GROUP 2 = 0.2431E+03

MEAN OF GROUP 3 = 0.1792E+03

STANDARD ERROR OF THE MEANS= 0.7240E+02

r= 2 K = 2.920 C.Diff. = 0.211E+03

r= 3 K = 3.070 C.Diff. = 0.222E+03

GROUP 1 VS GROUP 2 TEST VALUE= 0.556E+01 < C.Diff.(0.211E+03) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.694E+02 < C.Diff.(0.222E+03) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.639E+02 < C.Diff.(0.211E+03) ==> NON-SIGNIFICANT

ANOVA FOR DEPTH OF PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF AVERAGE RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

LEACHING DEPTH OF PEAK CONC. IN AVERAGE RAINFALL YEAR

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.3625E+03	0.3500E+03	0.2000E+03
0.3625E+03	0.3500E+03	0.2000E+03
0.3750E+03	0.3500E+03	0.2000E+03
0.1250E+02	0.5000E+02	0.5000E+02
0.1250E+02	0.5000E+02	0.5000E+02
0.1250E+02	0.5000E+02	0.5000E+02
0.5000E+02	0.1125E+03	0.3750E+02
0.5000E+02	0.1125E+03	0.3750E+02
0.5000E+02	0.1125E+03	0.3750E+02

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.25880E+05	2	0.1294E+05	0.7280E+00
WITHIN GROUPS	0.42660E+06	24	0.1777E+05	
TOTALS	0.45248E+06	26	==> NON-SIGNIFICANT	

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.1431E+03

MEAN OF GROUP 2 = 0.1708E+03

MEAN OF GROUP 3 = 0.9583E+02

STANDARD ERROR OF THE MEANS= 0.4444E+02

r= 2 K = 2.920 C.Diff. = 0.130E+03

r= 3 K = 3.070 C.Diff. = 0.136E+03

GROUP 1 VS GROUP 2 TEST VALUE= 0.278E+02 < C.Diff.(0.130E+03) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.472E+02 < C.Diff.(0.136E+03) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.750E+02 < C.Diff.(0.130E+03) ==> NON-SIGNIFICANT

ANOVA FOR DEPTH OF PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF LOW RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

LEACHING DEPTH OF PEAK CONC. IN LOW RAINFALL YEAR

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.1500E+03	0.1875E+03	0.1000E+03
0.1500E+03	0.1875E+03	0.1000E+03
0.1500E+03	0.1875E+03	0.1000E+03
0.1250E+02	0.3750E+02	0.3750E+02
0.1250E+02	0.3750E+02	0.3750E+02
0.1250E+02	0.3750E+02	0.3750E+02
0.1250E+02	0.5000E+02	0.3750E+02
0.1250E+02	0.5000E+02	0.3750E+02
0.1250E+02	0.5000E+02	0.3750E+02

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.66667E+04	2	0.3333E+04	0.9176E+00
WITHIN GROUPS	0.87188E+05	24	0.3633E+04	
TOTALS	0.93854E+05	26	==> NON-SIGNIFICANT	

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.5833E+02

MEAN OF GROUP 2 = 0.9167E+02

MEAN OF GROUP 3 = 0.5833E+02

STANDARD ERROR OF THE MEANS= 0.2009E+02

r= 2 K = 2.920 C.Diff. = 0.587E+02

r= 3 K = 3.070 C.Diff. = 0.617E+02

GROUP 1 VS GROUP 2 TEST VALUE= 0.333E+02 < C.Diff.(0.587E+02) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.000E+00 < C.Diff.(0.617E+02) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.333E+02 < C.Diff.(0.587E+02) ==> NON-SIGNIFICANT

ANOVA FOR DEPTH OF PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF PESTICIDE: DICAMBA AND DUNCAN'S MULTIPLE RANGE TEST

DEPTH OF PEAK CONCENTRATION FOR DICAMBA

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.6000E+03	0.5000E+03	0.3750E+03
0.6125E+03	0.5250E+03	0.3750E+03
0.6125E+03	0.5250E+03	0.3750E+03
0.3625E+03	0.3500E+03	0.2000E+03
0.3625E+03	0.3500E+03	0.2000E+03
0.3750E+03	0.3500E+03	0.2000E+03
0.1500E+03	0.1875E+03	0.1000E+03
0.1500E+03	0.1875E+03	0.1000E+03
0.1500E+03	0.1875E+03	0.1000E+03

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.11709E+06	2	0.5855E+05	0.2362E+01
WITHIN GROUPS	0.59483E+06	24	0.2478E+05	
TOTALS	0.71192E+06	26		==> NON-SIGNIFICANT

******************** DUNCAN"S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.3750E+03

MEAN OF GROUP 2 = 0.3514E+03

MEAN OF GROUP 3 = 0.2250E+03

STANDARD ERROR OF THE MEANS= 0.5248E+02

r= 2 K = 2.920 C.Diff. = 0.153E+03

r= 3 K = 3.070 C.Diff. = 0.161E+03

GROUP 1 VS GROUP 2 TEST VALUE= 0.236E+02 < C.Diff.(0.153E+03) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.150E+03 < C.Diff.(0.161E+03) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.126E+03 < C.Diff.(0.153E+03) ==> NON-SIGNIFICANT

ANOVA FOR DEPTH OF PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF PESTICIDE: 2,4-D AND DUNCAN'S MULTIPLE RANGE TEST

DEPTH OF PEAK CONCENTRATION FOR 2,4-D

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.2500E+02	0.3750E+02	0.7500E+02
0.2500E+02	0.3750E+02	0.7500E+02
0.2500E+02	0.3750E+02	0.7500E+02
0.1250E+02	0.5000E+02	0.5000E+02
0.1250E+02	0.5000E+02	0.5000E+02
0.1250E+02	0.5000E+02	0.5000E+02
0.1250E+02	0.3750E+02	0.3750E+02
0.1250E+02	0.3750E+02	0.3750E+02
0.1250E+02	0.3750E+02	0.3750E+02

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.65625E+04	2	0.3281E+04	0.2800E+02
WITHIN GROUPS	0.28125E+04	24	0.1172E+03	
TOTALS	0.93750E+04	26		==> SIGNIFICANT

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.1667E+02

MEAN OF GROUP 2 = 0.4167E+02

MEAN OF GROUP 3 = 0.5417E+02

STANDARD ERROR OF THE MEANS= 0.3608E+01

r= 2 K'= 2.920 C.Diff. = 0.105E+02

r= 3 K = 3.070 C.Diff. = 0.111E+02

GROUP 1 VS GROUP 2 TEST VALUE= 0.250E+02 > C.Diff.(0.105E+02) ==> SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.375E+02 > C.Diff.(0.111E+02) ==> SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.125E+02 > C.Diff.(0.105E+02) ==> SIGNIFICANT

ANOVA FOR DEPTH OF PEAK CONCENTRATION IN THE INDIVIDUAL CONDITION OF PESTICIDE: ATRAZINE AND DUNCAN'S MULTIPLE RANGE TEST

DEPTH OF PEAK CONCENTRATION FOR ATRAZINE

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.1125E+03	0.1750E+03	0.8750E+02
0.1125E+03	0.1750E+03	0.8750E+02
0.1125E+03	0.1750E+03	0.8750E+02
0.5000E+02	0.1125E+03	0.3750E+02
0.5000E+02	0.1125E+03	0.3750E+02
0.5000E+02	0.1125E+03	0.3750E+02
0.1250E+02	0.5000E+02	0.3750E+02
0.1250E+02	0.5000E+02	0.3750E+02
0.1250E+02	0.5000E+02	0.3750E+02

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.19063E+05	2	0.9531E+04	0.5229E+01
WITHIN GROUPS	0.43750E+05	24	0.1823E+04	
TOTALS	0.62813E+05	26		==> SIGNIFICANT

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.5833E+02

MEAN OF GROUP 2 = 0.1125E+03

MEAN OF GROUP 3 = 0.5417E+02

STANDARD ERROR OF THE MEANS= 0.1423E+02

r= 2 K = 2.920 C.Diff. = 0.416E+02

r= 3 K = 3.070 C.Diff. = 0.437E+02

GROUP 1 VS GROUP 2 TEST VALUE= 0.542E+02 > C.Diff.(0.416E+02) ==> SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.417E+01 < C.Diff.(0.437E+02) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.583E+02 > C.Diff.(0.416E+02) ==> SIGNIFICANT

ANOVA FOR SOLUBLE MASS IN THE INDIVIDUAL CONDITION OF PESTICIDE: DICAMBA AND DUNCAN'S MULTIPLE RANGE TEST

SOLUBLE MASS OF DICAMBA BELOW THE ROOT ZONE

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.1455E+01	0.1126E+01	0.1173E+01
0.1455E+01	0.1126E+01	0.1170E+01
0.1455E+01	0.1125E+01	0.1168E+01
0.1453E+01	0.1650E+01	0.1081E+01
0.1454E+01	0.1634E+01	0.1081E+01
0.1454E+01	0.1667E+01	0.1081E+01
0.1428E+01	0.2234E+01	0.1349E+01
0.1436E+01	0.2251E+01	0.1349E+01
0.1438E+01	0.2255E+01	0.1349E+01

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.10128E+01	2	0.5064E+00	0.6077E+01
WITHIN GROUPS	0.20001E+01	24	0.8334E-01	
TOTALS	0.30129E+01	26		==> SIGNIFICANT

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.1448E+01

MEAN OF GROUP 2 = 0.1674E+01

MEAN OF GROUP 3 = 0.1200E+01

STANDARD ERROR OF THE MEANS= 0.9623E-01

r= 2 K = 2.920 C.Diff. = 0.281E+00

r= 3 K = 3.070 C.Diff. = 0.295E+00

GROUP 1 VS GROUP 2 TEST VALUE= 0.227E+00 < C.Diff.(0.281E+00) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.247E+00 < C.Diff.(0.295E+00) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.474E+00 > C.Diff.(0.281E+00) ==> SIGNIFICANT

ANOVA FOR SOLUBLE MASS IN THE INDIVIDUAL CONDITION OF PESTICIDE: 2,4-D AND DUNCAN'S MULTIPLE RANGE TEST

SOLUBLE MASS OF 2,4-D BELOW THE ROOT ZONE

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.1716E-12	0.2435E-12	0.2496E-14
0.1757E-12	0.2602E-12	0.2496E-14
0.1812E-12	0.2769E-12	0.2496E-14
0.7397E-12	0.8988E-10	0.1825E-15
0.7522E-12	0.9153E-10	0.1825E-15
0.7666E-12	0.9717E-10	0.1825E-15
0.1452E-12	0.3002E-13	0.1100E-16
0.1487E-12	0.3293E-13	0.1100E-16
0.1510E-12	0.3374E-13	0.1100E-16

#################### ONE-WAY ANOVA ANALYSIS TABLE ####################

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.57186E-20	2	0.2859E-20	0.3985E+01
WITHIN GROUPS	0.17222E-19	24	0.7176E-21	
TOTALS	0.22940E-19	26		==> SIGNIFICANT

#################### DUNCAN'S MULTIPLE RANGE TEST ####################

MEAN OF GROUP 1 = 0.3591E-12

MEAN OF GROUP 2 = 0.3105E-10

MEAN OF GROUP 3 = 0.8965E-15

STANDARD ERROR OF THE MEANS= 0.8929E-11

r= 2 K = 2.920 C.Diff. = 0.261E-10

r= 3 K = 3.070 C.Diff. = 0.274E-10

GROUP 1 VS GROUP 2 TEST VALUE= 0.307E-10 > C.Diff.(0.261E-10) ==> SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.358E-12 < C.Diff.(0.274E-10) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.310E-10 > C.Diff.(0.261E-10) ==> SIGNIFICANT

ANOVA FOR SOLUBLE MASS IN THE INDIVIDUAL CONDITION OF PESTICIDE: ATRAZINE AND DUNCAN'S MULTIPLE RANGE TEST

SOLUBLE MASS OF ATRAZINE BELOW THE ROOT ZONE

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.2196E+01	0.5598E+01	0.5940E+01
0.2225E+01	0.5730E+01	0.6092E+01
0.2257E+01	0.5839E+01	0.6132E+01
0.1313E+01	0.3622E+01	0.1454E+01
0.1331E+01	0.3706E+01	0.1454E+01
0.1350E+01	0.3804E+01	0.1454E+01
0.3257E+00	0.1077E+01	0.2454E+00
0.3333E+00	0.1135E+01	0.2454E+00
0.3378E+00	0.1157E+01	0.2454E+00

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.22406E+02	2	0.1120E+02	0.2869E+01
WITHIN GROUPS	0.93729E+02	24	0.3905E+01	
TOTALS	0.11614E+03	26	==> NON-SIGNIFICANT	

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.1296E+01

MEAN OF GROUP 2 = 0.3519E+01

MEAN OF GROUP 3 = 0.2585E+01

STANDARD ERROR OF THE MEANS= 0.6587E+00

r= 2 K = 2.920 C.Diff. = 0.192E+01

r= 3 K = 3.070 C.Diff. = 0.202E+01

GROUP 1 VS GROUP 2 TEST VALUE= 0.222E+01 > C.Diff.(0.192E+01) ==> SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.129E+01 < C.Diff.(0.202E+01) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.934E+00 < C.Diff.(0.192E+01) ==> NON-SIGNIFICANT

ANOVA FOR SOLUBLE MASS IN THE INDIVIDUAL CONDITION OF HIGH RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

SOLUBLE MASS BELOW ROOT ZONE, IN HIGH RAINFALL YEAR

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.1455E+01	0.1126E+01	0.1173E+01
0.1455E+01	0.1126E+01	0.1170E+01
0.1455E+01	0.1125E+01	0.1168E+01
0.1716E-12	0.2435E-12	0.2496E-14
0.1757E-12	0.2602E-12	0.2496E-14
0.1812E-12	0.2769E-12	0.2496E-14
0.2196E+01	0.5598E+01	0.5940E+01
0.2225E+01	0.5730E+01	0.6092E+01
0.2257E+01	0.5839E+01	0.6132E+01

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.75774E+01	2	0.3789E+01	0.7290E+00
WITHIN GROUPS	0.12474E+03	24	0.5197E+01	
TOTALS	0.13231E+03	26	==> NON-SIGNIFICANT	

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.1227E+01

MEAN OF GROUP 2 = 0.2283E+01

MEAN OF GROUP 3 = 0.2408E+01

STANDARD ERROR OF THE MEANS= 0.7599E+00

r= 2 K = 2.920 C.Diff. = 0.222E+01

r= 3 K = 3.070 C.Diff. = 0.233E+01

GROUP 1 VS GROUP 2 TEST VALUE= 0.106E+01 < C.Diff.(0.222E+01) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.118E+01 < C.Diff.(0.233E+01) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.126E+00 < C.Diff.(0.222E+01) ==> NON-SIGNIFICANT

ANOVA FOR SOLUBLE MASS IN THE INDIVIDUAL CONDITION OF AVERAGE RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

SOLUBLE MASS BELOW ROOT ZONE, IN AVERAGE RAINFALL YEAR

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.1453E+01	0.1650E+01	0.1081E+01
0.1454E+01	0.1634E+01	0.1081E+01
0.1454E+01	0.1667E+01	0.1081E+01
0.7397E-12	0.8988E-10	0.1825E-15
0.7522E-12	0.9153E-10	0.1825E-15
0.7666E-12	0.9717E-10	0.1825E-15
0.1313E+01	0.3622E+01	0.1454E+01
0.1331E+01	0.3706E+01	0.1454E+01
0.1350E+01	0.3804E+01	0.1454E+01

#################### ONE-WAY ANOVA ANALYSIS TABLE ####################

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.48952E+01	2	0.2448E+01	0.2092E+01
WITHIN GROUPS	0.28078E+02	24	0.1170E+01	
TOTALS	0.32974E+02	26	==) NON-SIGNIFICANT	

#################### DUNCAN'S MULTIPLE RANGE TEST ####################

MEAN OF GROUP 1 = 0.9283E+00

MEAN OF GROUP 2 = 0.1787E+01

MEAN OF GROUP 3 = 0.8451E+00

STANDARD ERROR OF THE MEANS= 0.3605E+00

r= 2 K = 2.920 C.Diff. = 0.105E+01

r= 3 K = 3.070 C.Diff. = 0.111E+01

GROUP 1 VS GROUP 2 TEST VALUE= 0.859E+00 (C.Diff.(0.105E+01) ==) NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.833E-01 (C.Diff.(0.111E+01) ==) NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.942E+00 (C.Diff.(0.105E+01) ==) NON-SIGNIFICANT

ANOVA FOR SOLUBLE MASS IN THE INDIVIDUAL CONDITION OF LOW RAINFALL YEAR AND DUNCAN'S MULTIPLE RANGE TEST

SOLUBLE MASS BELOW ROOT ZONE, IN LOW RAINFALL YEAR

GROUP 1: PRZM, GROUP 2: PRZM+FEM, GROUP 3: GLEAMS+FEM

-------------------- INPUT DATA --------------------

0.1428E+01	0.2234E+01	0.1349E+01
0.1436E+01	0.2251E+01	0.1349E+01
0.1438E+01	0.2255E+01	0.1349E+01
0.1452E-12	0.3002E-13	0.1100E-16
0.1487E-12	0.3293E-13	0.1100E-16
0.1510E-12	0.3374E-13	0.1100E-16
0.3257E+00	0.1077E+01	0.2454E+00
0.3333E+00	0.1135E+01	0.2454E+00
0.3378E+00	0.1157E+01	0.2454E+00

******************** ONE-WAY ANOVA ANALYSIS TABLE ********************

SOURCE	SUM OF SQURES	D.F.	MEAN SQUARE	F-TEST
BETWEEN GROUPS	0.19168E+01	2	0.9584E+00	0.1636E+01
WITHIN GROUPS	0.14055E+02	24	0.5856E+00	
TOTALS	0.15972E+02	26	==> NON-SIGNIFICANT	

******************** DUNCAN'S MULTIPLE RANGE TEST ********************

MEAN OF GROUP 1 = 0.5888E+00

MEAN OF GROUP 2 = 0.1123E+01

MEAN OF GROUP 3 = 0.5315E+00

STANDARD ERROR OF THE MEANS= 0.2551E+00

r= 2 K = 2.920 C.Diff. = 0.745E+00

r= 3 K = 3.070 C.Diff. = 0.783E+00

GROUP 1 VS GROUP 2 TEST VALUE= 0.534E+00 < C.Diff.(0.745E+00) ==> NON-SIGNIFICANT

GROUP 1 VS GROUP 3 TEST VALUE= 0.574E-01 < C.Diff.(0.783E+00) ==> NON-SIGNIFICANT

GROUP 2 VS GROUP 3 TEST VALUE= 0.592E+00 < C.Diff.(0.745E+00) ==> NON-SIGNIFICANT

APPENDIX J

SELECTED GRAPHS OF CONCENTRATION PROFILES

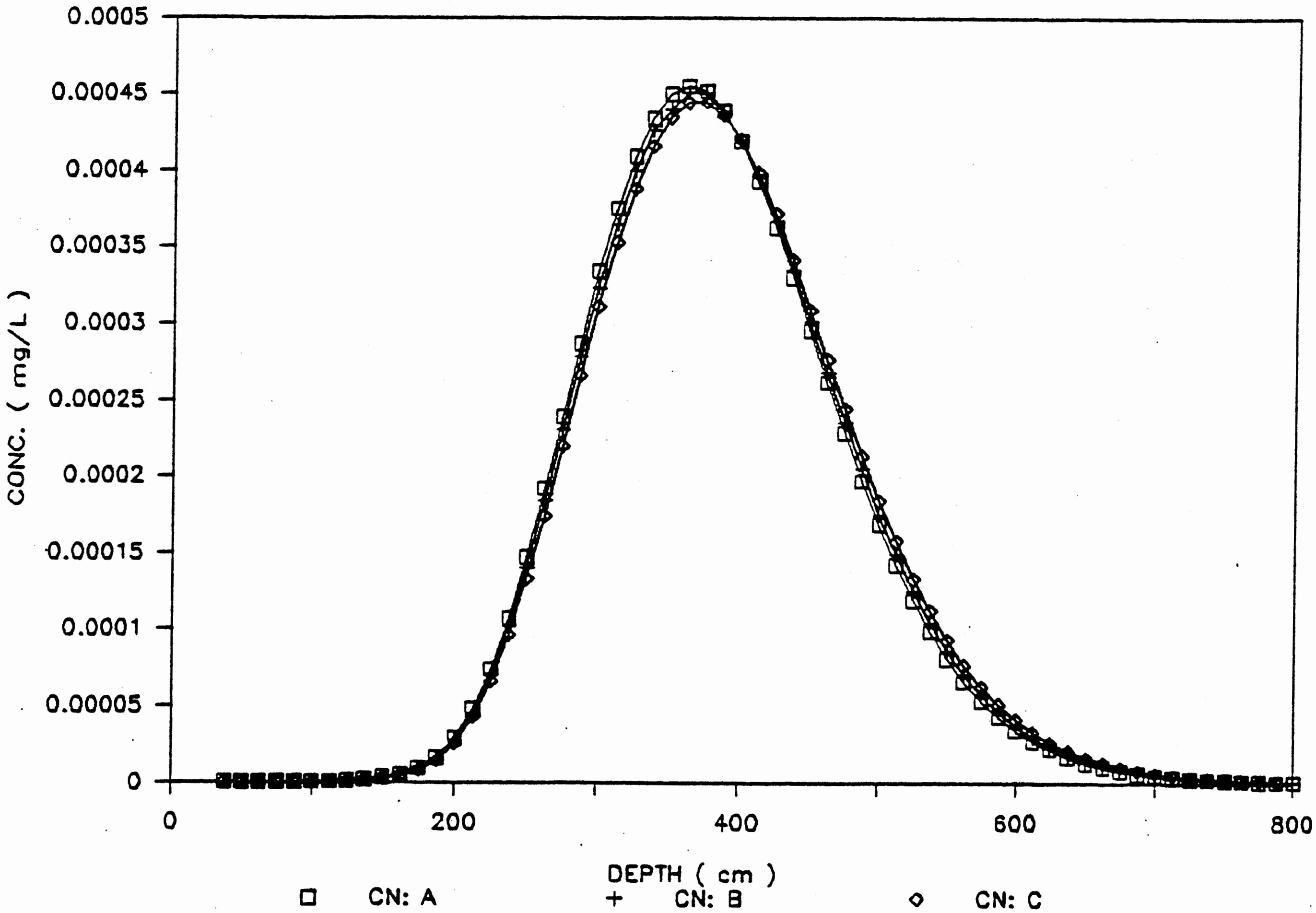

Figure (7). Concentration Profile Of Dicamba Simulated By PRZM Under The Three Curve Numbers

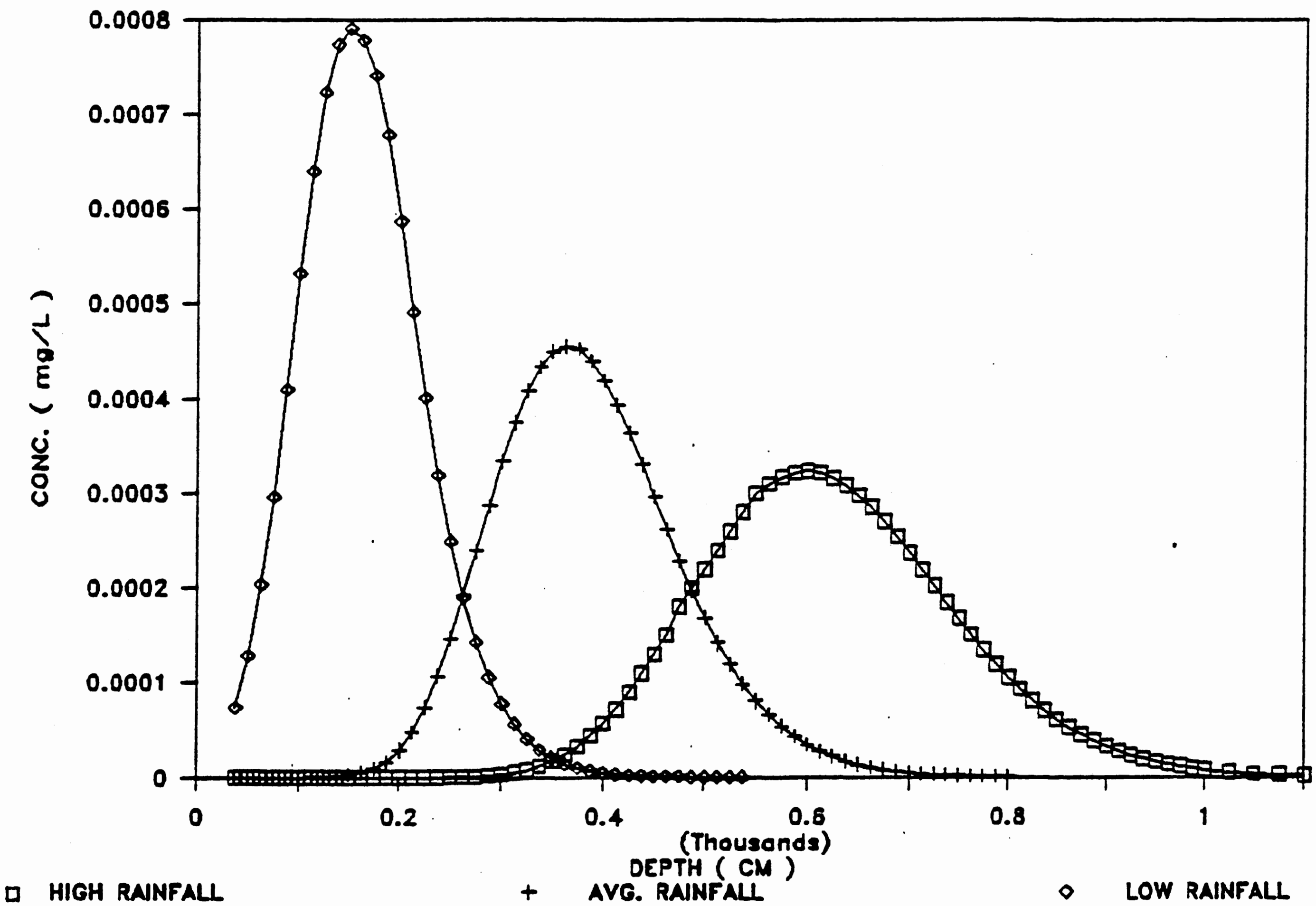

Figure (8). Concentration Profile Of Dicamba Simulated By PRZM In The Three Rainfall Years

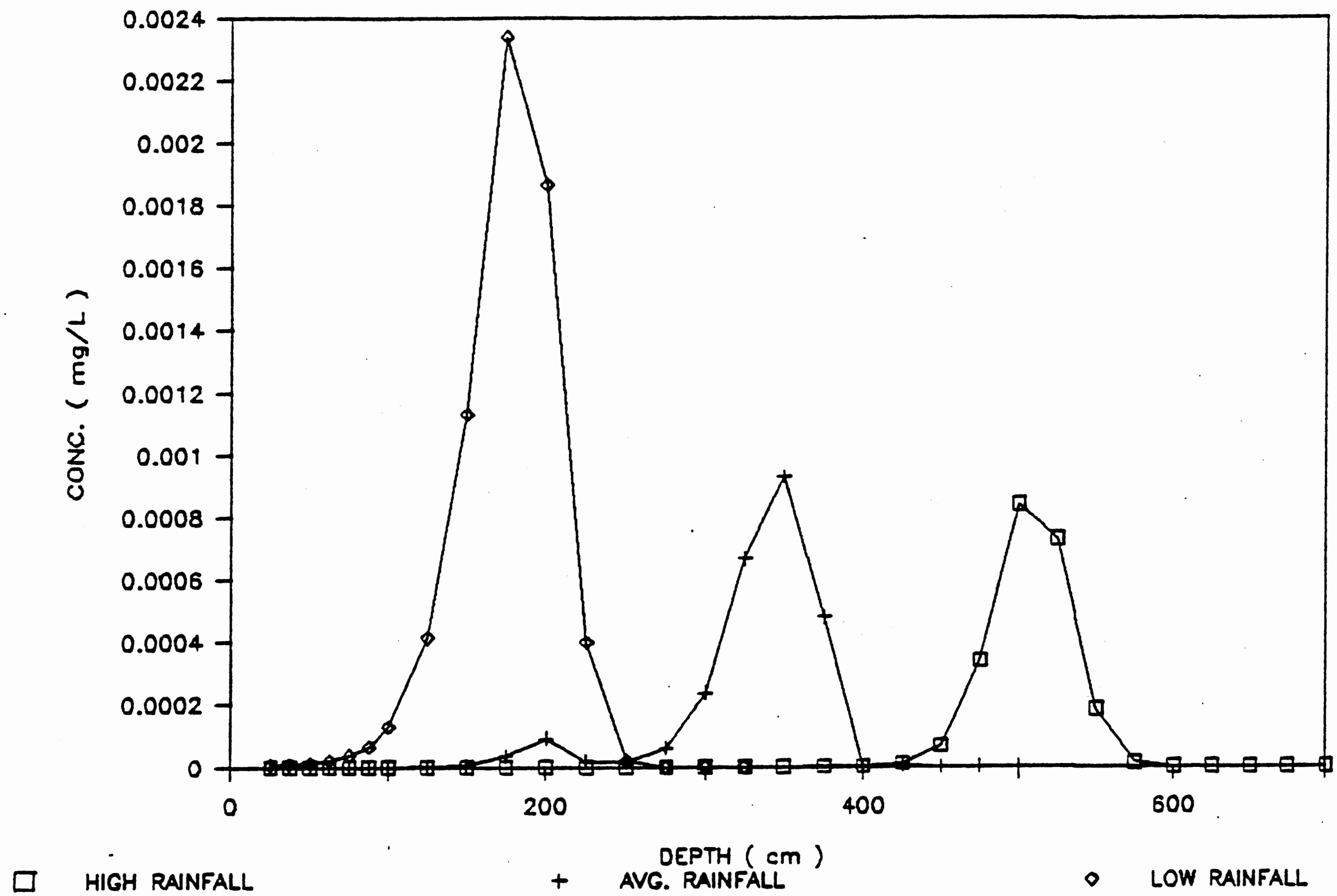

Figure (9). Concentration Profile Of Dicamba Simulated By PRZM+FEM In The Three Rainfall Years

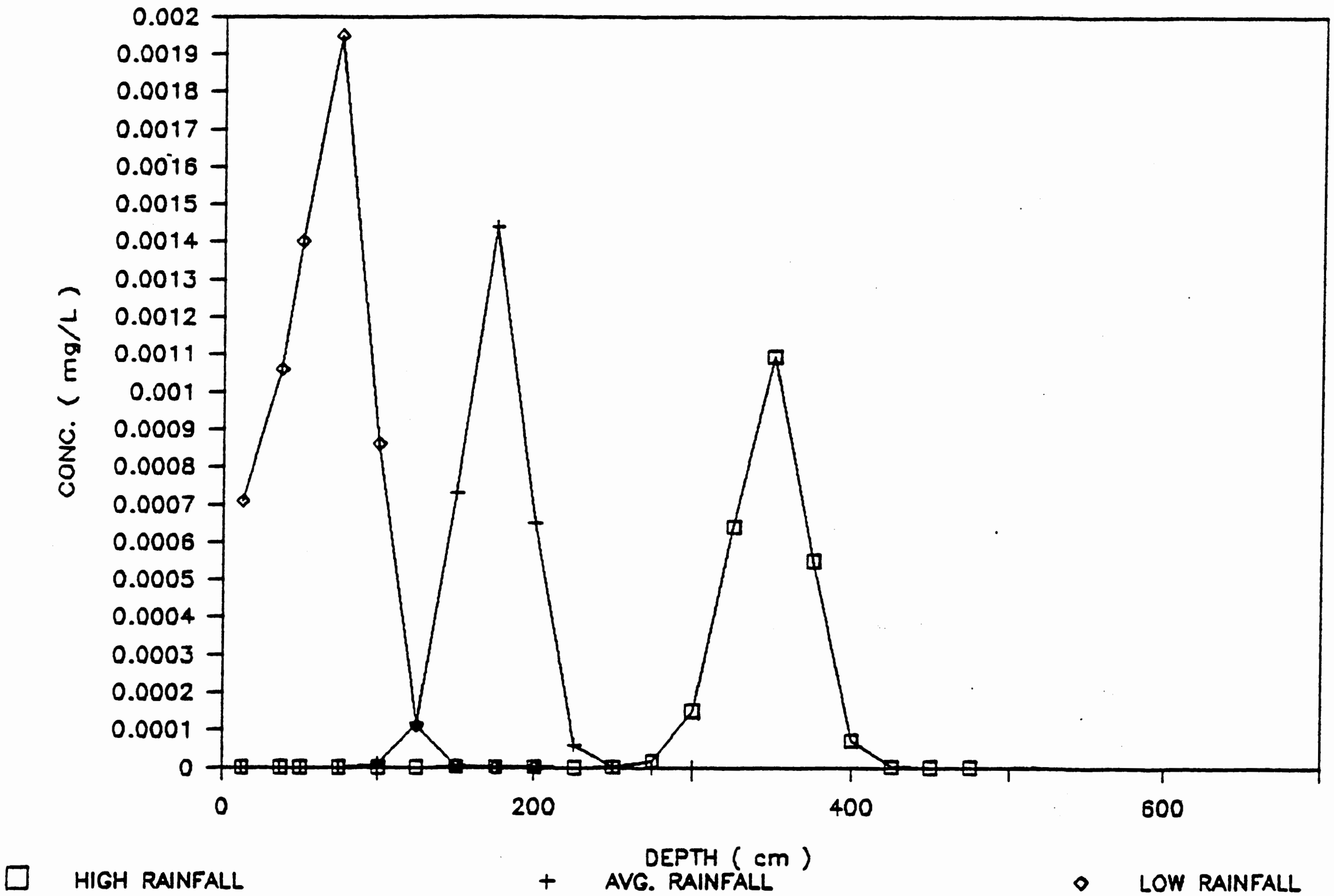

Figure (10). Concentration Profile Of Dicamba Simulated By GLEAMS+FEM In The Three Rainfall Years

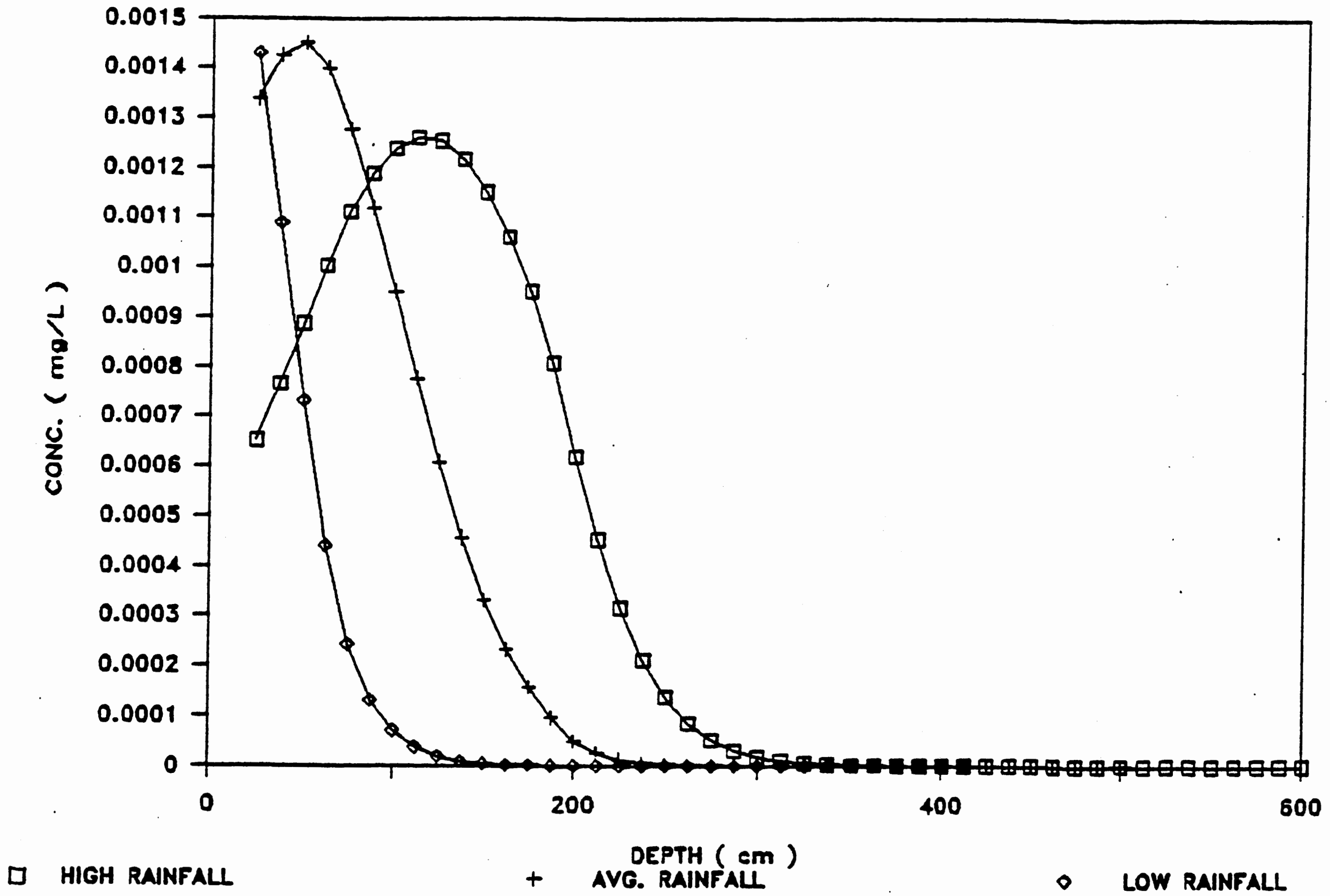

Figure (11). Concentration Profile Of Atrazine Simulated By PRZM In The Three Rainfall Years

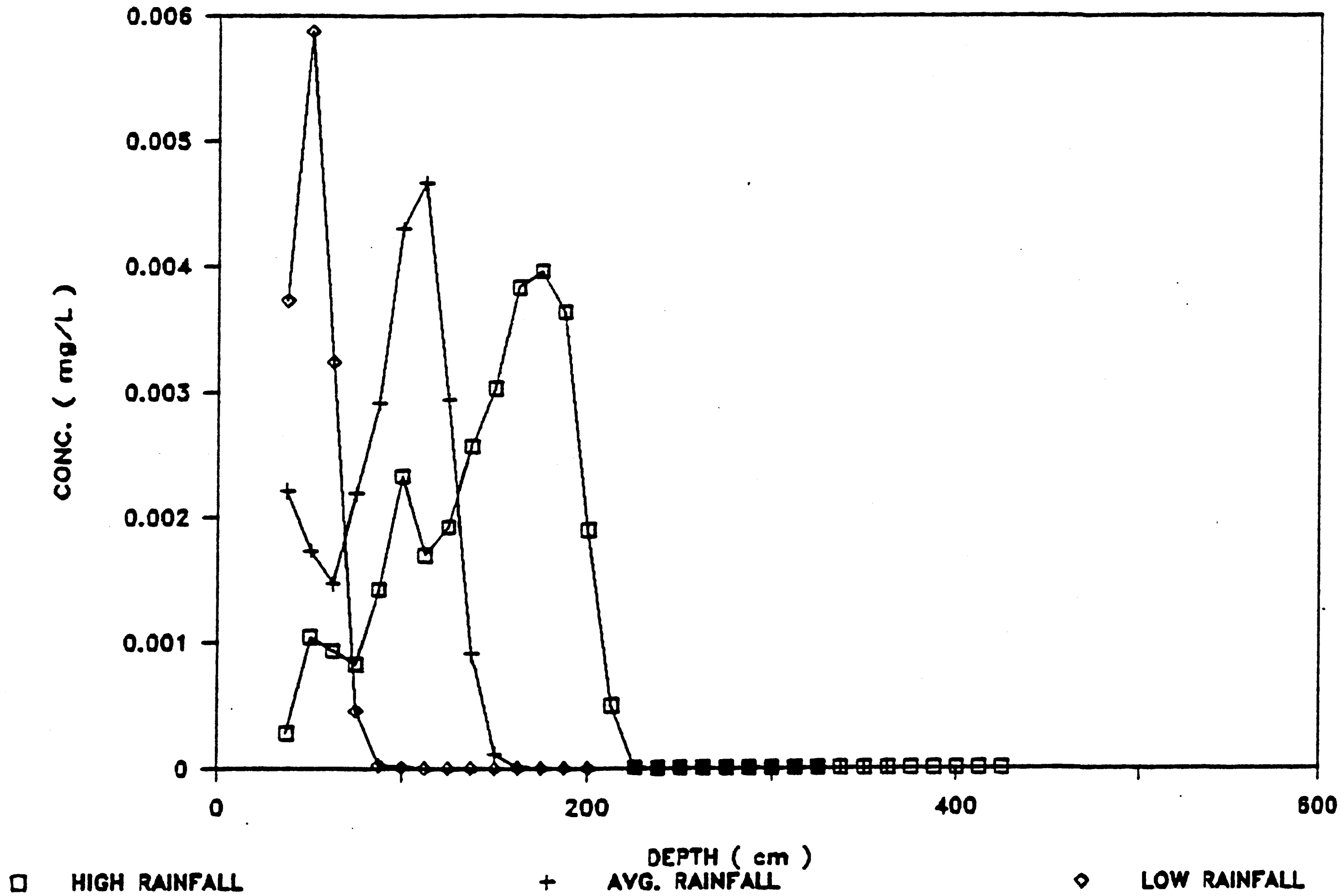

Figure (12). Concentration Profile Of Atrazine Simulated By PRZM+FEM In The Three Rainfall Years

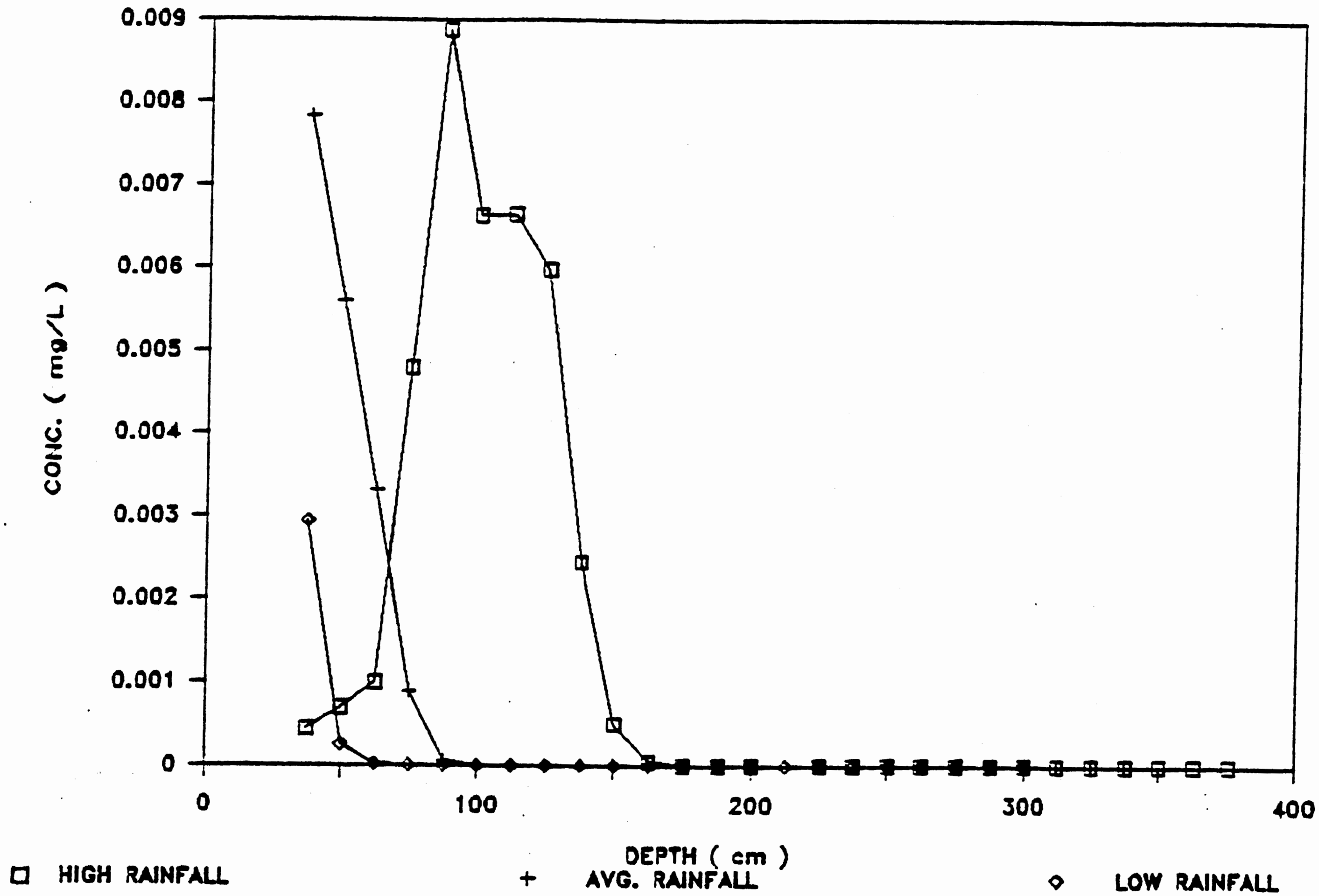

Figure (13). Concentration Profile Of Atrazine Simulated By GLEAMS+FEM In The Three Rainfall Years

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